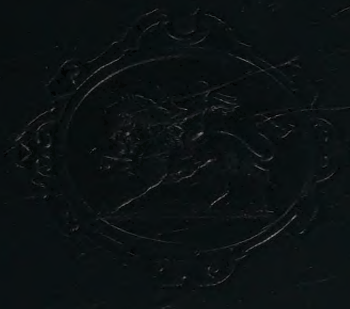

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THE MISBEHAVIORISTS

THE MISBEHAVIORISTS

PSEUDO-SCIENCE
AND THE MODERN TEMPER

BY

HARVEY WICKHAM

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TO ALL ENQUIRING MINDS, AND TO THOSE DISTURBED BY THE APPARENT LOGIC IN MANY CURRENT THEORIES HOSTILE TO THEIR DEAREST CONVICTIONS, THIS BOOK IS DEDICATED

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THE MISBEHAVIORISTS

CHAPTER I

THE MODERN TEMPER

THE past appears to be dead.

"If the world of poetry, mythology and religion represents the world as man would like to have it, while science represents the world as he gradually comes to discover it, we need only compare the two to realize how irreconcilable they appear," says Joseph Wood Krutch, associate editor of *The Nation* and the author of a biography of Poe, writing in *The Atlantic Monthly* for February, 1927. "The romantic ideal of a world well lost for love, and the classic ideal of austere dignity seem equally ridiculous, equally meaningless when referred, not to the temper of the past, but the temper of the present."

Hilaire Belloc is equally insistent as to the existence of this modern temper, for he remarks in the course of some "Cheerful Thoughts on Christmas" [1]

"I think it foolish to disguise from ourselves the plain fact that, in the societies which abandoned the Faith in the sixteenth and seventeenth centuries, the last supports of Christian doctrine are breaking down very rapidly indeed. Of the doctrines themselves there is little left . . . while the minority, which still feel some attachment to some few of these doctrines, feel that attachment in a

[1] *America*, December, 4, 1926.

decreasing degree and more and more as a vague, dissolving sentiment; less and less as a principle.

"The old feeling that the doctrines were sacred and intangible, and that attack upon them was intolerable, has so utterly passed that the modern generation does not even understand it. . . . There has been hardly any defense, hardly any resistance; the last remainder of the creed . . . has been allowed to slip away unnoticed like the last few coins of a fortune dissipated by a man so debauched as to have lost his memory."

Both Belloc and Krutch, it will be observed, agree that the world has changed—that is, that the popular idea as to what life really is, has changed. They differ only as to the sentiment with which the mass of the population are supposed to regard the alterations which have taken place in the view. Belloc, who is a Catholic, believes that Protestants at least are quite satisfied to have lost the world of "poetry, mythology and religion"; have in fact "allowed it to slip away unnoticed." Krutch, the radical editor, suggests that there has been a struggle, that science has forced man to give up the world as he would like to have it and to accept the world as he has gradually come to discover it—not by making the lost world undesirable, but by making it seem ridiculous and without actuality.

Krutch, I think, is right, in so far as the vast majority are concerned. They have resisted, Protestants as well as Catholics, and many who are neither Catholic nor Protestant but merely lovers of tradition and of the classic ideal of austere dignity and of the romantic ideal of a world well lost for love. They have struggled. They still struggle. But there is an ever increasing demand from some quarters that the struggle be given up in despair.

Now if science indeed represents the world as man

gradually comes to discover it—that is, if science represents the world as it is; and if the testimony of scientists as to the nature of this reality be fairly uniform and uncontradictory, with a growing unanimity promising to bring an eventual unison out of such discords as may still exist, then the only thing for the sensible citizen to do is to let the dead past bury its dead, turn from the grave with as little moaning as possible, and adapt himself with all speed to changed conditions. The advice, "Do it now!" is being hurled at him. Why should he not heed it? Nobody wants to be a mere reactionary, still less to live in a fool's paradise.

But does science represent the world as the world really is? Can we say that there is any likelihood of the scientific picture being more photographically perfect than is, or was, the romantic picture? Are scientists in agreement, so that there is little or no choice or opinion offered? Are their theories themselves logically consistent? What, precisely, is science? And finally, have its findings been faithfully reported to us?

These are some of the questions which this book attempts to answer. But before plunging merrily into such a task it may be well to pause and consider yet further the testimony of Belloc. He may be mistaken as to people in general, but he is almost incredibly correct in regard to a small but very influential body of conspicuous persons who may be described as the Materialistic Philosophers. Scientists some of them call themselves, and scientists they are—of a sort. But as they permit themselves to be perpetually hag-ridden by questions of eschatology—doctrines relating to that ultimate dim Thule towards which the whole creation does or does not move—philosophy is what they chiefly have to offer, no matter by

what other name they seek to give it a more modern and therefore presumably sweeter odor.

The ultimate nature of things engrosses them, and just how little they struggle against the threatened loss of a world of poetry, mythology and religion may be seen by a quotation taken at random, or, to be more specific, from "The Mechanist Conception of Life," by a veritable general in the materialistic army, Prof. Jacques Loeb, formerly of the University of California.

"Our wishes and hopes, disappointments and sufferings," he says, "have their source in the instincts which are comparable to the light instincts of the heliotropic animals."

A tropism, it should perhaps be explained for the benefit of the older generation, is a tendency to move toward or away from any external object, the operation being carried out by means of chemical and mechanical changes within the subject. Thus the heliotrope, which always strives to turn towards the sun, got its name. It is said to be positively tropic to light. Prof. Loeb, however, seems to be negatively tropic in this regard, for he continues:

"The need of the struggle for food, the sexual instinct with its poetry and its chain of consequences, the maternal instincts with the felicity and the suffering caused by them . . . are the roots from which our inner life develops. For some of these instincts, the chemical basis is at least sufficiently indicated to arouse the hope that their analysis from the mechanistic point of view is only a question of time."

"Hope," he says. The second of the virtues, once set between Faith and Charity, is here involved to express the author's reaction to the prospect that some day all the movements of the inner life may be reduced to the level of

so many warping planks exposed to variations in humidity and to changing temperatures. The modern temper, as it exists in the minds of those who seek to create and control it, certainly seems to have become emotionally adjusted to an abandonment of the classic idea of dignity. Heretofore man has based his pride chiefly upon his intelligence, the freedom of his will, his possession of a soul, and his conviction that he was made in the image of God. But according to the materialists, no mind, no will, no soul exists, and God is merely the "behavior of the universe." [2]

"There is no such thing as mind in the old sense of the word," says J. B. Eggen.[3] And what is it in the new sense of the word? "It cannot be considered as . . . separate from the body," Mr. Eggen goes on. Is it the brain, then —the brain in the old sense of the word? By no means. "The mind is not a thing with which we react, it is a form of reaction. We do not think with our brain; there is nothing inside the brain but a lot of neurones."

The mind cannot be considered as separate from the body, neither do we think without brain. With what, then, do we think? Obviously we do not think at all in the old sense of the word. Thinking, we are about to be told, is only a collection of motions. And he who "thinks" the theory cannot be made plausible has yet to read Eggen's illustrious masters. But is this science? That same science which has transformed the appearance of the world and given us the telegraph, the telephone, the phonograph, the automobile, the electric light, the air-plane, radio, and television? We shall see.

[2] "The Approaching Crisis," by Henry Nelson Wieman, teacher of philosophy at Occidental College, Los Angeles, *Century Magazine*, November, 1926.

[3] *Current History*, September, 1926.

"The Approaching Crisis" would seem to be well named, and in it Mr. Wieman, who is also the author of "Religious Experience and the Scientific Method," informs us that the decline of religion has been largely due to its "inadequate adjustment to scientific method and discovery." Adding, "At the present time it is research in the field of psychology and sociology which is demanding a transformation in our thinking,"—that is, in our notions. Psychology is unquestionably the most popular form of that "challenge to fundamental beliefs" of which so much is heard. And Dr. John B. Watson, editor of the *Journal of Experimental Psychology,* and formerly Professor of Psychology at Johns Hopkins, makes all former challenges seem weak, for he says—in the first chapter of his "Psychology from the Standpoint of a Behaviorist":

"Psychology, up to very recent times, has been held so rigidly under the dominance both of traditional religion and of philosophy—the two great bulwarks of medievalism—that it has never been able to free itself and become a science. . . . In the late sixties an attempt was made" to make it such. "The boast was voiced that psychology . . . had become a science without a soul—that is, a natural science." But "notwithstanding the many laboratories here and abroad, it has never been able to substantiate this claim. . . . The psychology begun by Wundt has failed to become a science,"—apparently because some remnants of soul still cling to it. And Dr. Watson concludes, "Before progress could be made in astronomy, it had to bury astrology; neurology had to bury phrenology; and chemistry had to bury alchemy. But the social sciences, psychology, sociology, political science and economics, will not bury their medicine men."

He is speaking, of course, of psychology prior to Dr. Watson, of the psychology of Wundt, which resulted in the Binet intelligence tests. This in its day was considered a very materialistic psychology indeed, superceding the psychology of the William James or the Herbert Spencer type, which also in its day voiced the boast that it was a science, tough, and without bowels of compassion. How rapidly we progress. James lived until 1910, Spencer until 1903. It was not until 1912, when, according to Dr. Watson, "behaviorism first showed its head," that the burying of the medicine men began. And two years later came the War! The boast can now be voiced without fear of contradiction that psychology has no soul.

Still if it be true science, and if science be but another name for reality, I for one am going to get at the burying of my own medicine men without further delay. I notice a considerable amount of such burying going on about me. Men are hurrying with the work as if afraid of being caught with a corpse or two on their hands and undisposed of. A sort of terror is stalking through the land, afflicting especially the writers of books and magazine articles—the terror of not being able to keep up with the Joneses in their employment of the undertaker. The famous Experimental Method, but late a fugitive, hounded from hole to corner and from corner to hole, has found influence and capital. It wields a big stick, or at least a big stick is being wielded in its name.

It was once said, "Wisdom crieth in the streets, How long ye simple ones will ye love simplicity?" And now a voice, still purporting to be Wisdom's, fairly yells: "Bring us your dead!" One would think that a pestilence was abroad. Possibly there is. Formerly men bowed down

to the image which Nebuchadnezzar the king had set up, or cast their babes before the car of Juggernaut. Today they would rather die, some of them, than be found obstructing the wheels of progress. Science, grown rich, has acquired such prestige as was once accorded only to Cæsar.

And no wonder. It has given us Copernicus, Galileo, Galvani, Volta, Faraday, Pasteur, the Curies, Edison, Marconi, Westinghouse, Burbank, and thousands of others—men for the most part personally poor, but adding without measure to the material wealth of the world. If all these men are back of the big stick; if it be they who bid us give up our God, our souls, wills and even our minds, ordering us to become accustomed to the idea that we are but machines—and if in doing so they are sticking to their business and not wandering off into fields they have failed to make their own, it might (perhaps) be folly to disobey.

But let us first make certain as to whose voice is on the air. We have, all of us, a few more or less cherished beliefs. We have grown up leaning upon—call them props and crutches if you will. Some of us have even been riveted to moral scruples which, when we try to go in a direction they forbid, dog us with the clanking hinderance of a ball and chain. We doubt if we could continue to be good citizens without them. We do not even know if good citizens, in the old sense of the word, are any longer desired. Without our props we are likely simply to fall—and we have never yet seen people walking upright without props of some sort. We actually doubt the advisability of trying to progress on all fours.

There are new props, better than the old? Good! Let us see them. Let us test them, and make sure that they be indeed from science's own workshop. And having men-

tioned the Watson brand of artificial limb, we may as well begin by experimenting with that, finding out by what still waters and into what green pastures we may wander with its aid.

CHAPTER II

BEHAVIORISM FROM THE STANDPOINT OF A PSYCHOLOGIST

I. THE MISSING MR. MIND

DR. WATSON practically begins his best known book, "Psychology from the Standpoint of a Behaviorist," with the statement that he is not concerned with problems of consciousness. And one at first understands him to mean that in his capacity of behaviorist he is not concerned with problems of this sort. He knows as a human being, one supposes, that he is alive. He does not, presumably, address his books to people in a state of coma. So it would seem that, as a man, he is concerned not only with his own consciousness but with the consciousness of others; that he is like the judge who knew something when off the Bench but refused to know it when on.

As we read, however, this kindly interpretation becomes untenable.

"Consciousness . . . is but an indefinable phrase. . . . Even if [objective proofs of consciousness] existed, they would exist as isolated, unmeasurable 'mental curiosities.' . . . The behaviorist finds no evidence for 'mental existences' or 'mental processes' of any kind. . . . If behaviorism is ever to stand for anything . . . it must make a clean break with the whole concept of conscious-

ness." Our thinking processes "are not different in essence from tennis-playing, swimming, or any other activity. . . . Meaning . . . never arises in the scientific observation of behavior."

Thus far he goes in this one book. In a previous volume [1] he merely concluded that "one can assume either the presence or absence of consciousness . . . without affecting the problems of behavior by one jot or one tittle." But in "The Myth of the Unconscious" [2] he throws subterfuge to the winds and says plainly:

"The behaviorist finds no 'mind' in his laboratories, sees it nowhere in his subjects . . . if the behaviorists are right, then . . . *there can be no such thing as consciousness.*"

Why? Because "personality . . . is the reaction-mass as a whole." Can you put marbles in a bag and shake them till the mass of their reactions becomes aware of itself? Obviously not. Accepting for the sake of argument the definition of personality as it appears from the Watson "standpoint,"—there is no argument. Logic leads us straight into nothing. This is also the conclusion of J. S. Moore, who contends that *content* when accented upon the first syllable signifies merely *context*—not the thing inside (there is no thing inside) but the things around it. Which makes it clear that I have been guilty of gross presumption in even trying to attach meaning to "psychology from the standpoint of a behaviorist."

This may sound like an attempt to be funny, to make cheap humor out of random extracts from a book half or not at all understood, but whether I understand psy-

[1] "Behavior, An Introduction to Comparative Psychology," New York, 1914.
[2] *Harper's Magazine,* September, 1927.

chology from the standpoint of a behaviorist or not, I was never more serious in my life. Not only Dr. Watson but many other adult men are solemnly asking us with perfectly straight faces if we dare to call not our souls but ourselves our own. And if we nod an affirmative, they smile in their beards, and imply that we must have lacked early advantages.

But it will be urged it cannot be that so large a number of university professors have gone mad. They must have some way of deceiving themselves. And indeed they have. Metaphysics has been defined as the art of befuddling one's self methodically, and of metaphysics of this sort none are so fond as those who decry metaphysics altogether. "Reaction-mass as a whole" sounds like a reasonable expression, does it not? Abstractions always do. And yet reactions can have no mass. They are only movements, not the things which move. Try and get any meat out of a movement and see what you have for dinner.

But these fallacies do not usually travel alone. Watsonianism in particular is fond of the company of facts. It mixes up Behaviorism, as a mere study of behavior, in a vast confusion of Psychology, Physiology, Ethics and irreligion. It seeks now to blind us with passion, now to swamp us in detail—lest we remember what we are talking about.

Thus Dr. Watson's great book bristles with facts—pages and pages of them taken straight from physiology. He divides our bodies into three groups of parts, according to function—receptors, conductors and effectors. The receptors receive impressions from the outer world and are nothing but our old friends, the five senses—eyes, ears, nose, the taste-buds of the tongue, and those areas (chiefly of cuticle) which are sensitive to touch. The con-

ductors are the nerves. The effectors, or the bringers about of effects, are the muscles and glands. Now the glands, at least those of the endocrine or ductless variety, are comparatively new-comers in the world of knowledge. But the other things are as familiar as doctors' bills. There have been changes in nomenclature, nothing more.

Yet these changes are significant. Receptors take the place of the senses because (in all seriousness) the behaviorist wishes to get rid of that hateful word "sense" and its implications. A similar motive must have been active when it came to naming the secretions from the ductless glands. They used to be called Hormones, meaning "I stir up." This no doubt was objectionable, because some of the hormones do not stir us up; they quiet us down. Dr. Watson knows them all as autocoids, which has the advantage of being non-committal in this regard. What is more to the point, it implies something automatic. Let us see how they work.

But right here we are met by a lack of knowledge. The secretions from only a few of the endocrines (notably andrenin and thyroxin) have as yet been isolated and analyzed. But there is good reason for believing that they regulate, to a certain extent at least, not only the ductless glands among themselves but (through the sympathetic nerves) the action of the unstriped muscles which control the stomach, intestines and various other unconscious or vegetative processes.

Autocoidal secretion seems to be very much at the beck and call of our emotions, or else our emotions are very much at the beck and call of our autocoids; but whether you hitch the cart before the horse or the horse before the cart, the believer in human freedom need be no more alarmed over the autocoids than he is over the

fact that drugs have certain effects when taken into the system. It was known even in the ages of faith that a man was not quite himself after partaking too freely even of a drug so charmingly outward mannered as is alcohol.

The behaviorism of the autocoids is more obscure. They become conspicuous chiefly by their absence. Thus the removal of the parathyroids (part of the thyroid apparatus situated on either side of the larynx and windpipe) produces convulsions. Its autocoid is therefore believed to be of a restraining type. The removal of the thyroids themselves produces cretinism, and thyroxin, their active principle (it is sixty percent iodine) was isolated only recently by E. C. Kendall, of the Mayo Foundation. Suprarenal extract (from the suprarenal apparatus near the kidneys) aids in recovery from fatigue.

As to the pituitary apparatus at the base of the brain, "gigantism is supposed to be due to an overactive anterior lobe; obesity and sexual infantilism to the lack of secretion of the posterior lobe." (Watson.) The thymus gland (in the neck near the thyroids) is believed by Dr. Walter Timme to be linked with the pineal (which is a part of the brain structure) in a related system dominating the life cycle from birth to puberty. If the function of the pineal is disturbed in children, "there is a rapid development of the reproductive organs, precocity, and an increased growth of skeleton. It is thus supposed that this gland furnishes an inhibitory autocoid." (Watson.)

To the absence of the puberty gland (also called the interstitial, and endocrine not to be confounded with the gonads, or true sex cells, to which is entrusted the reproductive function)—to the absence of the puberty gland is attributed the observed effects of castration, and "there is a growing tendency on the part of investigators . . .

to believe that man is as old as his glands." Therefore, "since the remaining glands apparently cannot stay youthful in the absence of a sufficient output from the puberty glands, it is only natural to connect senescence or old age with the decline in the output from this gland." (Watson.) Hence all the experiments in rejuvenation, the transplantation of glands from monkeys and goats, made from the days of Brown-Sequard (famous about the year 1889) down to those made by Steinach, Voronoff and many others of the present time. Thus the simian becomes our "glandcestor," so to speak, whether he be our forbear or not.

But let us take leave of all this physiology and observe what sort of psychology we can get from our receptors, conductors and effectors under experimental conditions.

For convenience sake, the behaviorist calls whatever happens to the victim of an experiment the "stimulus" or "situation," and whatever the victim does in consequence the "response." So we will imagine that a stimulus of some sort, say the spectacle of Eliza crossing the ice, impinges upon a receptor—in this case the retina. Physically, this is a light stimulus, and for a brief instant Eliza may be said to be all in your eye. But a conductor (the optic nerve) takes the matter up and transmits an impulse (in the form of a "wave of chemical decomposition") to the brain. Here it encounters a lot of cells, called neurones. If J. B. Eggen be right in saying that "there is nothing inside the brain but a lot of neurones," it could not well encounter anything else.

A neurone under the microscope looks somewhat like a bush which has been pulled up by the roots. The ball of earth adhering to it represents the nucleus, or brain-cell

proper. The branches are called dendrites, and in the human body they extend from sometimes less than a millimeter to sometimes more than a yard in length—in the latter case becoming what the layman usually means when he says "nerves." Each nucleus possesses several, often a great number, and it is through these dendrites that it receives the neural, or nervous, impulse which it passes on through its axone to the next cell. There should be a small tap-root to our bush, terminating in brush-like fibres, to represent this axone. Usually there is but one to a cell, though it may send off collaterals.

We have many millions of these neurones, each one complicated beyond belief if examined in detail. But let us not venture too far into that awful tangle of vaguely definable structures where even the neurologist gropes with difficulty, and about which he is constrained to make his tentative conclusions with bated breath. But it may be well to note that neurones are of three sorts. Let us call them receiving neurones, association neurones, and sending neurones; and let us liken them to three lines of soldiers, the receivers busily getting information from No Man's Land, the associators passing it on to the senders operating the artillery. Receptors, conductors and effectors again. But out of fairness to Dr. Watson it should be said that he calls them nothing of the sort. In fact, he thinks that "entirely too much" has been made of the association neurone, and "of the whole localization of function." The brain is not popular with behaviorists anywhere, for sometimes it shows a tendency to upset their most cherished theories.

Nevertheless the brain is there, and Eliza is crossing the ice. The brain sees her. How? Through its receiving

neurones. A soldier out in No Man's Land holds a camera (the eye) in his hand, or dendrite, and takes her picture, which he transfers to his other hand, or axone, ready to pass on. It is like one of these very modern pictures sent by telegraph, for all he receives or passes on is a series of shocks, or "waves of chemical decomposition." The effect would be the same if the soldiers communicated by means of hand-clasps, a Morse code of squeezes or taps,—something like that.

The second soldier (association neurone) having possessed himself of the picture, relays it in turn to the third —one who is in touch with the guns, which in this case are the muscles and glands. The truth, of course, is not quite so simple as this. There are probably nine billion neurones to begin with, each supplied with numerous arms. Any association neurone appears to be able to get in touch with every other neurone in either of the other two classes, and even the simplest picture or bit of information must manifest itself in an unconscionable number of waves or impulses, each one quite meaningless in itself. What a wild tumult of activity must be taking place within us when the battle outside waxes hot!

Nor are all the observation posts outside. Many are within the body. And from the data which they all transmit emotions and coördinate actions are born—at least so behaviorists would have us believe. The striped muscles twitch, and bones are jerked about. The unstriped muscles are stimulated to action, and the viscera are affected. The ductless glands increase their secretions, or suspend them. This, say the behaviorists, is what makes us brave; or cowardly; wild with rage or tender with love.

Our bowels of compassion are moved. Perhaps we have no stomach for a fight. If we run away the vulgar will declare that we have no guts.

But we cannot always be thinking of neurones individually, so we think of them in chains. When two get in touch with each other (through the axone of the one and the dendrite of the other) the connection is called a synapse. When the chain includes all three sorts of neurones, it is called a reflex arc.

A reflex is what happens when you strike the patellar tendon of the knee with the side of your hand, with a tack-hammer, or with what Dr. Watson prefers to call "a percussion hammer." The leg registers a kick, because the blow sets up a wave of chemical decomposition in the dendrites of the receiving neurones which are nearest concerned; the wave passes to certain association neurones, and by them is passed to the kicking (striped) muscle. That is, it passes through a reflex arc, one of the several reflex arcs which are already in working order when we are born. Which means that the association neurones here involved have somehow already been educated to relay all despatches to the neurones which operate the kick—and to none other. So this reflex arc is called "unconditioned," and the stimulus which sets it in motion is said to be a "natural" stimulus. An unconditioned reflex is practically a tropism. Prof. Loeb ordered it to get busy and account for all behavior, human and other. It fell down on the job. We have not, it seems, enough knee and similar jerks to enable us to write a Ninth Symphony with their aid alone. Some other trifle was needed.

Dr. Watson says he has it—in the conditioned reflex. It is possible, we find, to get a reflex to respond to a stimulus which is not its "natural" stimulus. Food, for

example, is the natural stimulus of the reflex arc operating the salivary glands. The mouth waters when we begin to eat. But the Russian, Pavlov, bored holes in the cheeks of a dog, brought the salivary ducts into the open, and discovered that not only would the dog's mouth water at the contact of food, but that it would water at the mere sight of food. Then he rang a bell for several days at feeding time, and had the satisfaction eventually of seeing the dog's mouth begin to water when the bell was rung and no food was anywhere about.

Prof. Lashley, of the Hopkins Laboratory, has since invented an instrument which can be fastened to the inside of the cheek by means of suction, so that the secretions may be led to a tube without a surgical operation—which is a convenience when the victim is human. He has thus ascertained how many drops per minute was the normal slaver, and that chocolate in the (human) subject's hand increased it from three to five times; the smell of chocolate, five times; chocolate brought to the lips, nine times. "It may be said," observes Bertrand Russell [3] "that modern psychology consists of the discovery by the professors of what everybody else has always known."

Yet it must be confessed that we did not know the number of drops of saliva which lay behind the licking of our chops in the presence of something good, or that the sight and smell of chocolate were "unnatural" or "substituted" stimuli—still less that the substitution of unnatural for natural stimuli was both the foundation and superstructure of "education."

But we know now that we can obtain the knee-jerk by blowing a whistle, or cause the iris to contract at the

[3] "The Training of Young Children," *Harper's Magazine*, August, 1927.

smell of asafœtida. We have but to flash a bright light every time the herb is introduced into the vicinity; or (if I may use such old-fashioned language), associate whistles with percussion hammers in the "mind" of the subject.

Association is all it is. If you have learned to expect to be blinded by radiance every time you get a whiff of asafœtida, your eyes will begin to protect themselves even in the dark. If the sound of a whistle leads you to anticipate a blow on the patellar tendon, your leg will fly forward—at least theoretically. To get practical results, this education must begin very early.

But I have used the words "mind," "expect," "anticipate," and many expressions which imply conscious intelligence. In behaviorism all these are barred. The new stimuli are said to be "grafted" on the old stimuli, not upon the consciousness. All that can be said, then, is that when two stimuli, one natural and one unnatural, happen at the same time on a sufficient number of occasions, the reflex becomes conditioned so that it will do its stuff when the unnatural stimulus happens alone.

One other item and the mechanical foundation of psychology from the standpoint of a behaviorist will be complete. There are certain reflexes called "emotional reflexes." These are the things we do when we are afraid, angry, or in love—for Dr. Watson traces all emotions back to one of these three. Some go further, lump fear and anger together, and give us an emotional outfit reducable to likes and dislikes.

The new-born babe, Dr. Watson tells us, is afraid of nothing but loud noises and the sudden loss of physical support. These, then, are the natural stimuli of fear. Nothing but restraint makes him angry. Restraint, there-

fore, is the natural stimulus of fury. To prove it, the behaviorist drops a baby face downwards on a pillow, and notes that it clenches its hands as if in the attempt to grab something to prevent itself from falling. He hammers on an iron bar behind the infant ear, and observes that there is crying and shrinking away. He grips the little arms, and a struggle ensues.

As to love, Dr. Watson is not so clear. In one place he speaks of the reaching out of the baby arms as being prophetic of the nuptial embrace. In another he describes the natural love stimulus as a stroking of the erogenous zones. These zones, to be blunt, are the genitals, the breasts, the anal region and certain other portions of the surface of the body especially sensitive to touch. Perhaps there are two sorts of love, the active and the passive; just as there may be two sorts of dislike, shrinking fear and self-assertive rage. The former professor of psychology at Johns Hopkins can hardly be blamed for not making it plain. He is not the first who has been obfuscated by love.

But whatever love may be, the love-reflex, like the fear-reflex, the anger-reflex, or the unemotional motor-reflexes such as the knee-jerk, may be conditioned by having unnatural stimuli grafted on to their natural stimuli by bringing the natural and unnatural together in the field of their experience.

Albert, for example, the eleven-months old infant of a wet-nurse in the Hopkins Laboratories, was not naturally afraid of rats, a rat being neither a sudden loss of support nor a big noise. He reached out for a rat as readily as he reached for anything else. But every time he reached, an operator standing out of sight beat heavily upon an iron bar. So the reflex arc, beginning with the ear and ending in such glands as distill cowardice or inhibit cour-

age, grafted itself on to the reflex arc beginning with the rat-wave coming through the eye and terminating in the striped muscles that jerk the hand forward. And, as often happens, the grafter eventually won the day.

"At the first experiment," rat and noise being presented together, "the infant jumped violently and fell forward, burying his face in the mattress—he did not cry, however." But "at the eighth experiment," seven days later, when the rat alone was shown, "the baby began to cry. Almost instantly he turned sharply away, so rapidly that he was caught with difficulty before he reached the end of the table." [4]

Albert is now afraid of rats, there is no least doubt of that. You may throw your bang-bang instrument away, he will continue to recoil from rats. And not from rats only. The fear extends to furry animals of all sorts, to human hair, to cotton wool. In this instance it did not extend to the nurse, but sometimes it does. The fear stimulus is apt to graft itself on to whatever other stimuli happen to be operating.

Thus are emotional reflexes conditioned—by a performance which has a remarkable resemblance to the old method of punishing a child for wrong-doing, except that wrong-doing on the child's part is omitted as a necessary condition precedent.

This is psychology from the standpoint of a behaviorist. From the standpoint of a psychologist it looks as if all trace of psychology had thus far been carefully left out; for psychology is the study of the psyche, the soul, of the conscious self, or that part of the self which has at least the capacity of becoming conscious. Dr. Watson

[4] From Dr. Watson's own account of these experiments in "Psychology from the Standpoint of a Behaviorist."

says not. He thinks that psychology is the study of the reaction-mass. Anyway, he is convinced that reaction-mass psychology is all the psychology needed to explain everything. Mr. Mind may be missing, but he never will be missed. "The behaviorist asks for nothing to start with in building a human being but the squirmings everyone can see in the newborn infant." [5]

It is not asking for much, so we will now let him try.

2. AN UNDECIDED SYNAPSE

Eliza is still crossing the ice. The spectacle (in the form of a series of waves of chemical decomposition) is on its way, through reflex arcs, to striped and unstriped muscles; to ductless glands; to effectors, in short. It is time that some action ensued, that behavior on Eliza's part resulted in behavior on the part of the spectator.

Let us suppose that the spectator most interested is a bloodhound. "The behaviorist," we learn from Dr. Watson[1] "recognizes no dividing line between man and brute," save (he adds later) perhaps in the matter of "language." As the occasion here affords no time for talk, a bloodhound will serve as well as Senator Borah. Now what will the bloodhound do?

Were his reflexes unconditioned, he would do nothing of any consequence. On the unlikely chance of Eliza throwing a stone and hitting him on the patellar tendon, he might do a knee-jerk. Or, should her shadow come between him and the sun, the iris of his fearful eyes might contract. But none of these things happen. Eliza

[5] "The Behaviorist Looks at Instincts," *Harper's Magazine*, July, 1927.

[1] "Behavior, An Introduction to Comparative Psychology," p. 1.

furnishes no natural stimuli upon which an unconditioned reflex could act. Prof. Loeb, with all his tropisms, would be able to bring no real drama about.

This is a Watson bloodhound, however—a trained dog. All sorts of unnatural stimuli have been grafted upon his reflexes. For one thing, he has had the sight of little girl and the taste of little girl brought simultaneously into his experience a great many times. So the glands in his cheeks advance immediately from a salivary output of, say, five drops per minute, to some forty-five. He probably snaps his jaws, a "seeking motion" prompted by the emotion of love—for meat. Not only that, but he bounds forward—another seeking motion, which was once, I presume a puppy squirm. Anyway he bounds forward, and Eliza is caught. Or else he does not bound forward, but stands and sniffs, whines, or gives tongue, thus bridging the space between animal and man, but flatly refusing to attempt to leap the space of open water between dog and Eliza's cake of ice.

But why? Why does not the dog act automatically in obedience to the waves of chemical decomposition faithfully transmitted to his effectors? The villain of uncertainty lies in that intermediate set of neurones—those association neurones which Dr. Watson thinks have received already altogether too much attention. Some of their dendrites have made synapse with axones laden with the fear of the cold wetness of ice-water, and have communicated, not with the leaping but with the sniffing, whining and baying muscles, leaving the legs merely trembling.

What? Have the association neurones some choice as to the synapses they shall make? Is it left to them to say which, of a multitude of differently charged axones, their dendrites shall shake hands with? Does not mechanics

govern the connection which the association neurone effects with a million waiting dendrites already linked with a million different effectors? Is our soldier in the middle row permitted to suit himself as to what listening-post he shall get in touch with, and is he then allowed to do as he likes with the information?

What was lately a mere relay instrument seems suddenly to have been endowed with strange powers. If ever an arrangement was devised to look like the physical embodiment of consciousness and free will, this certainly is it. No wonder Dr. Watson would prefer to have us regard these brain areas as vague "silent" ones, wherein no function can be "localized." A behaviorist who should lose his unconsciousness would be more frightened than was Peter Schlemihil when he lost his shadow to the devil. The mere suggestion that the association neurone might be the Achilles' heel of insensibility must have shocked many a conditioned reflex back into infantilism. Dr. Watson remained and remains calm and aloof in the midst of his "silent areas." But others bestirred themselves with considerable zeal if not discretion. The problem was to find some purely blind and mechanistic agent capable of regulating the resistance of the synapse.

For that is the best way to think of it—as a resistance. A neural impulse will go farther in a given time along a simple nerve than it will along a route interrupted by neurones with little gulfs between them. Not only that, but when it comes out it is found to be measurably weaker than when it went in. Almost immediately it picks up again, and goes on, full speed ahead, as if somebody had stepped on the gas. How this little miracle is accomplished, nobody knows; nor whence comes the added force. Doubtless, however, it comes from the body in some perfectly

natural and ascertainable way. Certainly it has nothing to do with the will.

Has the synapse? That depends upon what causes its resistance to vary. The association neurone itself cannot possibly be the will. The very fact that it is observable under the microscope proves that. The most hopeful field of inquiry, therefore, is that of the resistance which is offered the neural impulse on its way from one neurone to another. If this resistance varies—and it does—it is possible to conceive how the disturbances from the outside world may be sifted, some ignored and some allowed full play in the responses which follow. Here would be Psyche, locking and unlocking her doors. I do not say that this is exactly what happens. Our knowledge of the brain, though vastly more complete than it was ten years ago, is still far too fragmentary to permit of the localization of function to this extent. I am only offering a hypothesis to explain the workings of a belief arrived at in quite another fashion from the one we are following here.

The synapse offers the least resistance in what used to be called the field of conscious attention; and by fancying that attention moved about from one brain-area to another without constraint and in conformity with some non-physical law, we used, in the good old days, be able to picture free will in action—not with much pretense to accuracy of detail, but in a way which was at least intelligible.

Physical scientists never liked this loose-footed field of attention. If it moved about, they wanted to know what moved it. Even if attention be only an area of super-"neutrition," it could hardly move without force—a fact which some psychologists, desperately anxious to be free

but having no force to put at the will's disposal, have tried in vain to get around.

But behaviorists will have nothing to do with conscious attention, free or bound. And as it was obviously necessary to find something to regulate synapsial resistance, they proceeded to find it.

It was soon discovered that the neural impulse, having once traversed a particular route, found the way thereafter easier, just as we find it easier to walk through snow after somebody has broken a trail. Repeated synapses, therefore, may be left in charge of Habit. But there has to be a first time. Habit, itself, depends upon this first time for its own direction; for habit follows the line of least resistance which this very first time creates. And the first time, the time of times, which determines all other times by wearing the initial path through the cranial snow, is—behavioristically speaking—determined by Chance!

What behaviorists wanted was to have nothing determine the first synapse, and not being mathematicians they fell into the error of supposing that chance was nothing, or the next thing to it. In reality they could not have made a worse selection. But, granting their premises, there was really nothing else to choose.

But let us call to the stand a distinguished witness as to the reality of the choice having been made. Chance leads me to select Prof. C. H. Warren, whose "A Study of Purpose" was first published in the *Journal of Philosophy, Psychology and Scientific Method*.[2] It chances that I have access to certain passages from this paper. Also he happens not to be a thoroughgoing behaviorist, as may be seen from the fact that he speaks of "purposive action"

[2] Vol. XIII.

and of "ideas." Bertrand Russell is of the opinion that there is only one thoroughgoing behaviorist in the world —Dr. Watson, to wit. I even hope to show that Dr. Watson steps out of his rôle in certain desperate pinches. But Prof. Warren is sufficiently mechanistic to warrant his being heard. He says: "The notion of purpose arose from a certain definite type of human experience. The typical purposive experience consists of a thought of some future occurrence followed by a series of actions which culminate in the very situation which the original idea represented. A human act is said to be purposive when it is preceded by an idea representing the situation which the act itself brings about."

Not quite as clear as a crystal, but it means that I light my pipe, not because I want to smoke but because I foresee that I will light it. Dr. Watson says practically the same thing, only he points out that the motions which provoke desire are small, observable only by means of instruments. "Visceral phenomena," for instance. And he makes the statement thoroughly behavioristic by adding that these visceral phenomena *are* desire, the only kind of desire which exists. But causes must precede effect, so Prof. Warren is trying to make "foreknowledge" serve for the needed something to touch off the visceral phenomena and bring desire into being.

He goes on to describe how he turns on the electric light in his study—not because he wants to read, but because he foresees that he is going to press the button and that then there will be light—in a physical sense, at least. He admits "desire" into the realm of being only after the action has begun, and explains it as a "kinesthetic image," —that is, an image derived from the muscular sense. Which means that he begins to want to read, and that I

begin to want to smoke, only after our muscles are on the way to produce smoke and light in available quantities. And he further testifies. "If the thought of an action leads to the production of that particular action . . . rather than to any one of the thousands of other kinesthetic experiences, the reason is that a definite association has previously been formed between this particular thought and this particular impulse. The origin of such an association *may be attributed to chance occurrence.*"

It is interesting to speculate upon what would have occurred had Prof. Warren chanced first to associate the electric light button with kinesthetic experiences originating in his feet instead of in his hands. What if he had been standing on his head amusing the children on that momentous day? Or, since he probably made his first acquaintance with electric light early in life, what if when playing circus as a boy he had accidentally *kicked* the button from "Off" to "On"? Obviously he would have obtained the fateful foresight that kicks will produce light. And he would have been destined all his life to play the acrobat before ever the kinesthetic experiences of his muscles could instigate in him the desire to read after dusk. Nor is it possible that he could have been rescued from his fate save by another chance experience yet more kinesthetically violent.

"The synapse," says Professor Pillsbury, sensibly enough, "is the point where action leaves its impress upon the nervous system." But he does not grow lyrical about it. For lyricism we must go to Miss Clara Stevens, a real behaviorist. She thus deposes and sings in *The Open Court*:[3] Here [in the synapse] lies the basis of character and destiny. No need of a recording angel to set down

[3] September, 1926.

our shortcomings against us. The mystic synapse is recorder; and avenger as well. Its use renders it all-powerful . . . its neglect bars further way for either temptation on the one hand or profitable deeds on the other. We can only act and think in the future as we have habituated the synapse in the past."

Surely the lady has allowed her enthusiasm to carry her too far. How can we have anything to do with the habituating of a synapse which is governed by chance? She tries to find a way out by maintaining that the original neural impulse may be determined "by such a material fact . . . as nutrition supplied or withheld by the cell-body." Does the cell-body, then, have a will of its own, so that it can either issue or withhold supplies? That were power indeed. And she speaks throughout her article of "mystery," "inclination," "motives," "ambitions," "tolerance," "bigotry," "principle," "idealistic acts," "clearness of judgment," and "firmness of purpose."

I have wronged her. Here we have no behaviorist, but a good woman trying to be a behaviorist but unable to leave all her commonsense behind her—a woman born, happily, without a trace of logic, and spared by chance from acquiring any. Not that Miss Stevens is one whit more illogical than is Dr. Watson. She is merely less obscure. On pages 319 to 321 of "Psychology from the Standpoint of a Behaviorist" we are given a list of six "determiners of acts," and told that "of course the most important determiner is the life-history of the individual." And the other five are mere portions of life-history. Dr. Watson is fond of the word Genetics, yet he carefully avoids the subject of true beginnings.

And Eliza still is crossing the ice. The bloodhound

still is doing something or nothing. Somehow, with all this "psychology" and with all Dr. Watson's mass of reactions at our disposal, we cannot get things to move. It will be necessary to try again.

3. ELIZA DOES NOT CROSS THE ICE

"The behaviorist," Dr. Watson assures us,[1] "can take [the] squirmings of the new-born—his unorganized finger movements, the movements of his arms, legs, feet and toes, the squirmings in his trunk, and weave them into highly complicated acts of sport, of skill—such as driving a nail with a hammer, carving with a knife, shooting with bow and arrow, or tennis-playing, climbing, crawling, running and walking. [He] can take the squirmings of the throat muscles, and weave them into those highly organized acts we call talking and singing—and, yes, even thinking. [He] can take the infantile squirmings of the gut—the unstriped muscular tissue of the alimentary tracts, diaphragm, heart, respiration, etc.—and actually organize them into those complicated emotional responses we call fears, loves and rages. . . . Give [him] just one hundred 'squirmings' . . . and let [him] tie them together by [his] methods, and [he will] have more than enough."

This is a comprehensive programme; if it is carried out it ought to be able not only to get Eliza across the ice but to produce the whole play of Uncle Tom's Cabin. Certainly one hundred squirmings are enough—enough of squirming. Their mere combination would produce an untold number—of squirms. And lest some might doubt as

[1] "The Behaviorist Looks at Instincts," *Harper's Magazine,* July, 1927.

to this, Dr. Watson calls attention to that mathematical formula known as "factorial n."

By factorial n one can determine the number of ways in which a given number of things can be put together. The calculation is accomplished by taking the given number and multiplying it by a number one less than itself; and then multiplying this result by a multiplier less by one than the first multiplier; and so on, the multiplier shrinking until it reaches zero. For instance, how many ways are there of arranging six books upon a shelf? The answer is amazing enough. For six times five times four times three times two, equals seven hundred and twenty, and we have limited the combinations to arrangements along a single straight line. One hundred squirms may be combined in enough different ways to satisfy the most captious. Factorial one hundred would, if worked out, look like an inter-allied debt.

But are squirms all we are looking for? What does Dr. Watson mean by "those complicated emotional responses we call fears, loves and rages?" He has used such words before, and it is time he were called to an account. There is no such thing as consciousness. Can there still be such a thing as an emotion? Yes, says Dr. Watson.

We are now in the presence of one of the most preposterous attempts at hocus-pocus ever recorded in the history of the human race. William James prepared the way by saying, "We feel sorry because we cry, angry because we strike," etc. But with James there was always the possibility of assuming that an emotion is what we feel of the various motions involved. At worst it was but the natural order of things reversed. And in James, if one does not like his philosophy of the moment, the totally different philosophy of some other moment is never far

to seek. But now that there is no such thing as consciousness, there would seem to be no way of feeling even a motion. Ergo, an emotion is merely motion. Squirms. The behaviorist asks for nothing else. Does he not?

"An emotion," says Dr. Watson,[2] "is an hereditary 'action pattern' involving profound changes of the bodily mechanism as a whole, but particularly of the glandular systems." This is at least consistent. An emotion is a group of motions which have been somehow linked together into a pattern by reflex arcs before we were born. He then speaks of emotion as a raising of the "bodily tone,"—that is, a speeding up, an increase in the general average and celerity of motions. Still consistent, however absurd. But why did Albert, the eleven-months old infant of that wet-nurse at the Hopkins Laboratories, "turn sharply away" at the eighth experiment, when the rat alone was shown him? Because he had learned to associate rats with a loud noise of which he was afraid. But does not this imply that he *disliked* the noise?

By a wild stretch of the imagination, I think I can almost see what is in the behaviorist's mind when he bids us believe that like and dislike can exist in a creature without consciousness. He means that there is no like or dislike about it; that what we call likes and dislikes are certain chemical changes which make us move either towards or away from objects. Tropisms, in short. I do not quite see how the mechanism for such phenomena could be arranged, but this may be merely because the mechanism of a tropism is too complicated for my comprehension. Likes and dislikes vary so much even when the same objects and the same people are involved. We are not simple in the way that a mariner's compass is simple, its north pole

[2] "Psychology from the Standpoint of a Behaviorist," p. 215.

always liking the south pole of a magnet, always disliking its fellow.

Consciousness itself is a complicated matter. For instance, we are never directly conscious of it; we are only conscious of objects. Our inmost self can only contemplate that which is not our inmost self. The eye does not see the eye, though it can observe its reflection in a mirror.

Things also happen of which we are not centrally conscious at all—things, for example, to which we are paying no attention. They yet have their effect. Can likes and dislikes perform their functions, then, without our knowing anything about it? I am for the moment quite willing to admit it—in the case of Dr. Watson. For all I know to the contrary, he may never be conscious. He would not be the first epistemologist who has made such a claim. But he does not claim just this. The behaviorist finds no consciousness "in his laboratories," none "in his subjects." He implies that *I* am never conscious, and there I know he is wrong.

Now since consciousness exists, in me at least (the reader must speak for himself), it probably has a function. So far as I am concerned, it is the one important—the only important—thing in life. Why, then, try to leave it out of the explanation of Albert's acquired dislike for rats?

It might have been well enough to leave it out of the description of Albert's behavior. If behaviorism were merely what its name implies, the detailed study of the way people other than the observer behave, it might be useful and certainly would not be ridiculous. But it seeks to be psychology and philosophy as well. It assumes, as we soon shall see, to instruct us in ethics and to overthrow religion. It fancies that it has deprived us of will.

Your consciousness and mine are of course two different phenomena, severed by the gulf which yawns between *meum* and *tuum*. I do not know that you are aware in the same way that I know that I myself am aware. I merely assume that you are. You look much like me. You behave much as I do. Therefore, as an act of courtesy, I grant that you are probably sentient and know what you are about—for the simple reason that I feel sure that I am sentient and know what I am about.

But all I am positively and subjectively certain of, as to you, is what I observe you to do. This observation may be extended, with your permission, to your insides. I may insert tubes which tap your glands. I may induce you to swallow rubber balloons, which I then fill with hot water (an experiment mentioned by Dr. Watson), and note the resultant reactions upon your muscles, smooth and striped. Still, all I know about you is what strikes my senses, which in the last analysis resolves itself into motions, large or small, of your body and members. The behaviorist's contention that an individual is merely the sum of his acts fits you well enough from my point of view. Were I not conscious myself, I would never even dream that you are conscious. If I did not reason, I would not be wise enough to suppose that you do. Did I not feel emotion, pleasure, and pain, I would be the last person to accuse you of feeling them.

Now Dr. Watson, when he assumes that because he finds no consciousness in his subjects there is therefore no such thing as consciousness, is entirely justified—if he is himself an unconscious man. But I fancy he is merely paying us the compliment of confusing himself with us. He is unable to put his hands upon *our* minds or feelings because they are forever hidden within us, and will never,

never, never permit themselves to be isolated, taken apart and chemically analyzed. That which is objective is conduct—it is not feeling. Certain light waves are felt as redness—but the waves are not the redness. Outside ourselves, everything of red exists, saving and excepting only its redness. Now is or is not redness an important part of red?

The brain is indeed but a few billion neurones, slightly damp. Dr. Watson, fumbling among them, sees only certain motions of matter. Naturally he sees no mind. But he modestly forgets that all the while he is observing these motions of ours and attributing them to other motions, and these to yet other motions, and so on *ad infinitum,* he is using his own mind—and a very ingenious mind it is, thus to reason itself out of existence. We all remember how granny used to lose her specs and look for them everywhere—through the very specs in question, which were all the while on the end of her nose.

Consciousness is a fact of consciousness, the most obtrusive fact in all the world. But it is not a fact outside of consciousness. There it is only an inference. Should Dr. Watson get hit on the head by a brick falling from his laboratory chimney (which God forbid!), he would not be immediately able to observe whether a dog's salivary secretions were increased by the sight and smell of chocolate or not.

Knowledge of glands can "amplify our conception," [3] says Levine, "but it by no means abolishes the need for a mental state."

"Not even by poetic license," adds Sidney Hook,[4] "can the earth be created through a deft masonry of its derivative effects." Neither can the mind. Or as J. R.

[3] "The Unconscious," p. 59.
[4] "The Metaphysics of the Instrument," in *The Monist,* July, 1927.

Kantor, of the University of Indiana, expresses it in his "Principles of Psychology,"—"The writers who hold such doctrines [that psychology is a matter of neuro-muscular or neuro-glandular responses] inevitably face the consequence of neglecting the description of most of the actual content not only of human but of animal psychology."

Says William James,[5] "Cases . . . prove the existence in our mental machinery of a sense of present reality more diffused and general than that which our special senses yield. . . . Nothing would be more natural than to connect it with the muscular sense. . . . But our interest lies with the faculty rather than its organic seat. . . . Something in you absolutely *knows* that result to be truer than any logic-chopping, rationalistic talk, however clever, that may contradict it."

Naturally, James H. Leuba, professor of psychology at Bryn Mawr, takes exception to such language on the part of James. Prof. Leuba has been attempting—in his "Psychology of Religious Mysticism"—to prove that holiness is a form of hysteria. He uses the old method of those who would define red without taking account of redness. That is, he leaves holiness out of the question, and then shows that the residue and hysteria (whatever that may be) have much in common.

"It is fortunate for science and philosophy," he says in a footnote to page 293, "that this passage does not represent William James completely. It expresses only one, or perhaps two, of the several moods or attitudes of this gifted writer."

This is quite true. The passage does not represent

[5] Varieties of Religious Experience," Lecture III, "The Reality of the Unseen."

James entirely. I know of no passage which does. But does saying so dispose of the attitude? The reader must judge for himself whether he has any inner conviction, or state, which will warrant him in saying he has it. Well may Prof. Kantor ask, "Is it not the attempt to biologize human phenomena which has resulted in handing over to novelists [to say nothing of novelists' brothers] the sole guardianship of the problems of human behavior and human personality?"

And since we have now allowed novelists to get in, we may as well listen to Stewart Edward White, who is not only a novelist but a journalist to boot. And he complains that "it is the habit of science to thrust in the background that which it is unable to weigh and measure and understand, which is the same as saying that it is the habit of science to be unscientific." It is certainly the habit of Dr. Watson. The hunting of big game seems to have given White most accurate powers of observation. Lions have this advantage over fallacies—they are able to kill off those who do not see them right and in time.

George A. Dorsey, whose "Why We Behave Like Human Beings" I shall venture to take a shot at before I finish, attempts to come to Dr. Watson's rescue and to save emotion for behaviorism without admitting any of its troublesome implications. So Dorsey tells us not to be puzzled; that emotions are like any of the other circumstances which go to make up a situation to which our mass of reactions must react. We "feel" them, he adds. Now as Dr. Watson's main contention is that we do not feel them, the admission of feeling is like permitting a wooden horse to be carried into the mechanistic Troy.

It may be argued (but not by behaviorists) that though Dorsey is not talking good Watsonianism, he is at least

talking sense. And of course he is when he speaks of emotion as a feeling. But he is talking nonsense when he claims that emotion is a factor like any other factor in a situation. And for this reason. The other factors may be viewed both objectively and subjectively, while if we attempt to objectify an emotion—to drive it into the open—it ceases to exist. It becomes a bundle of its own causes—autocoids, or what have you? Or of its own effects—yowlings, scratchings, clenchings of fists, grittings of the teeth, and other alterations in bodily positions, tensions, together with such chemical changes as may accompany them.

The fact that certain secretions from the ductless glands keep pace with certain emotions does not even prove that secretions cause emotion. An emotion that can be felt may cause the secretions. Still less does it prove that the secretion is the emotion. A scolding by your grandmother may also give you an emotion. Does that prove that the emotion was your grandmother? Emotion tends to release adrenin from the adrenal apparatus, which in turn acts upon the liver's surplus supply of sugar. This sugar gets into the blood, and the increase of sugar in the blood is therefore evidence that you have experienced an emotion. Even if you want to say that what you felt was sugar, need you add that the feeling *was* sugar?

A cat, we will say, is sitting on the table. Can we also say that there is an emotion sitting there beside the cat? An emotion belonging to you or to me, and not to the cat? Let us suppose that the cat has just upset a vase which you and I both prize. Behavioristically speaking, our reflexes are similarly conditioned in regard to it. So we both are grieved.

The cat exists subjectively within us (or at least within

me) in the form of a group of ideas of cat—or as Dr. Watson would insist, in the form of certain squirmings of particles, members, atoms, and such things. We seem to experience cat as a group of sensations of form, color, of cat-movements, etc. But if I shut my eyes, put cat out of my mind (i. e., shut off cat-stimuli from my receptors), I seem to cease to feel or think or to be aware of cat. Then, from some remark you make, I infer that you have kept your eyes open, and are still cat-wise *en rapport*. So I infer that your awareness of cat (no matter what "awareness" is) does not depend upon my awareness, or even upon your awareness of my awareness. So I assume that the cat has an objective existence, outside of us, and is a real cat. I assume also that the cat itself is the cause of our awareness of it; and I feel certain that while there may be as many awarenesses as there are people who are aware, there is only one cat in the room.

There is also but one broken vase. And it, too, is the cause of our being aware of it. Cat and vase are evidently of the same order of things to the extent that they both have an existence within the beholder (which the beholder knows through consciousness), and a certain inferred existence of their own. But how about the emotion awakened by the broken vase? Has that an existence independent of those experiencing it?

Ever since the days of ancient Greece, and probably since long before, certain philosophers have been trying to prove that not even the cat has such an outside existence. Things exist only in the philosopher's mind, and therefore the one thing which exists is the philosopher. The only way to refute this theory is by using your brains to an extent sufficient to arrive at the conclusion that, since some of the things you see look amazingly

like yourself, and react much as you do to yet other things, then it is at least highly probable that these other people and other things actually are.

Now the behaviorist's contention is merely the reverse of this all-in-the-mind theory—and is equally absurd. To him there is nothing in the mind; there is no mind. Instead of all being inside, all is outside.

Yet Dr. Watson considers himself privileged to speak not only of emotions and emotion-reflexes, but of "purpose," "failure," and "success." We begin with "random" squirms, he says, and now and then one of these "random" squirms is "successful," it accomplishes its "object." Unconscious "seeking motions" are continued until they are "satisfied." Such expressions are to be found scattered through all his writings.

But a seeking motion must be a motion which seeks something. If the babe be unconscious, how does it know when the seeking has been successful? Does it move in hopes of finding pleasure or of avoiding pain? It can feel neither pleasure or pain. Does it squirm to improve its general welfare? That is what the tropism theory assumes. But without consciousness there can be no such thing as welfare. It makes no slightest difference to the organism what happens to it, whether it lives or dies.

Our unconscious Eliza refuses to cross the ice, even when bayed at by an unconscious bloodhound. There is no reason why she should. An unconscious Eliza would be as comfortable inside of a bloodhound as anywhere else. And an unconscious bloodhound is as comfortable fasting as when fed.

Nevertheless, Dr. Watson, who is "not concerned with problems of consciousness," is about to introduce us to language, morality and reform!

4. TINKS! TINKS! KWAKS! KWAKS!

"Give me the baby," Dr. Watson begs,[1] "and I'll make it climb and use its hands in constructing buildings of stone or wood. . . . I'll make it a thief, a gunman, or a dope fiend. The possibilities of shaping in any direction is almost endless. Even gross difference in anatomical structure limit us far less than you may think. . . . Make him a deaf-mute, and I will still build you a Helen Keller. . . . Men are built, not born."

Shall we indeed give Dr. Watson the baby? Not yet. If baby is as plastic as he would have us suppose, the choice of a teacher carries with it momentous consequences. You see, we don't want him to make a thief, a gunman, or even a dope-fiend. This is just an old-fashioned prejudice, a hang-over from the days of consciousness. But we have it. A Helen Keller, a carpenter or a good stone-mason will do very well. We must, however, be reassured as to teacher's intentions. He has, no doubt, some high principle to guide him. Let him reveal it.

"The psychologist, having chosen human behavior as his material, feels that he makes progress only as he can manipulate and control it." [2] Very good. But this is not quite the point.

"In this work there is involved not only ability to predict situation from response, and the probable response given the situation, but the experimental manipulation of stimulus and the creation of response. . . . Stimuli must

[1] "The Behaviorist Looks at Instincts," *Harper's Magazine,* July, 1927.

[2] "Psychology from the Standpoint of a Behaviorist," p. 7.

be added to or subtracted from until appropriate response is attained." [3]

The method at least is plain. Baby is helpless protoplasm in the grip of whatever situation he finds himself. Dr. Watson does not allow even chance to interfere with those all-important initial synapses which, once made, will turn conduct over to habit. Baby is a mechanism, with no ability save that of wax to receive. His only "chance" is that the situation shall be all that could be desired. Not even the word "probable" placed before response promises any individual initiative, since the psychologist proposes to predict (he clearly means "work back to") the situation of which any given response was the answer. One wonders where the teacher's initiative is to come from, whether he too is the inevitable result of a chain of situations reaching back to the beginning of time; and if so, where the first situation came from—to say nothing of the first baby. But, which is more to the point, what is the meaning of that word "appropriate" preceding "response"? What makes a response "appropriate"? Obviously an appropriate situation. And we cannot tell whether a situation is appropriate or not until we know what response we wish to produce.

"Until we know more about the control of behavior during the tender years of infancy, it seems almost a dangerous experiment to bring up a child. The old argument that a good many millions of children have been successfully reared in the past few millions of years has just about broken down in the light of the now generally recognized lack of success of most people in making satisfactory adjustments to society." [4]

[3] "Psychology from the Standpoint of a Behaviorist," p. 8.
[4] *Ibid.*, p. 8.

What has also just about broken down is the argument that it is not a dangerous experiment to bring up a child—for the reason that no sane parent ever thought that it was not a dangerous experiment, quite the most dangerous and gloriously all-important experiment which life affords. If the child has no will or say in the matter, parenthood involves a higher responsibility even than that which a man has for his own soul—though of course the behaviorist will plead that he has no soul to be responsible for, and that—but there is no use going back again to the beginning of time. We shall have to give the teacher not only a soul but a free will, *pro tempore,* or he will stick on our hands just as Eliza stuck on the ice, and refuse to move. Things are not moving very rapidly as it is. What, for instance, is meant by "satisfactory adjustments"? Is there some doubt, after all, how baby will adjust himself to what is happening around him? No, says Dr. Watson.

"Without going too far beyond our facts [how far would be "too far"?] it seems possible to say that the stimulus is always provided by the environment, external to the body, or by the movements of man's own muscles and the secretions of his glands; finally, that response always follows relatively immediately upon the presentation or incidence of the stimulus. . . . These are really assumptions, but they seem to be basal ones for psychology." [5]

Since they are basal we will have to grant them, else we will be left relatively immediately without any psychology at all. A satisfactory adjustment, then, must be the usual and inevitable adjustment, but to a satisfactory situation. Those children who were successfully reared

[5] "Psychology from the Standpoint of a Behaviorist," p. 10.

Dr. John B. Watson
"Give me the baby"

during the past few millions of years must have had satisfactory situations to begin with. And it is "now generally recognized" that they were exceptions, and not "most people." There must be some criterion, then, by which a satisfactory situation—that is, one producing satisfactory response, or conduct—may be recognized. Has Dr. Watson any such criterion to offer? No. He says on page twelve of this same book, which gives us his "standpoint": "Psychology is not concerned with the goodness or badness of acts, or with their successfulness, as judged by occupational or moral standards."

I am afraid, then, it will not be possible to let Dr. Watson have the baby after all. Behaviorism has no ethics; no standard of conduct. Yet behaviorists are preparing to build "infant laboratories," and to save children from "unscientific parents." Dr. Watson, in particular, calls upon us to make "systematic, long-sustained genetic studies upon the human species, begun in infancy and continued until past adolescence,"—an excellent idea. And he demands it because only thus can we gain that "experimental control over human conduct so badly needed both for general social control and for individual happiness." He has, then, ethical notions, though he nowhere explains how he came by them. What are they? This question at least can be answered by noting what sort of conditioning he wishes to give the reflexes. And of these, love should be the most important.

"The original situation which calls out the observable love responses seems to be the stroking or manipulation of some erogenous zone, tickling, shaking, gentle rocking, patting and turning upon the stomach across the attendant's knee," so psychology from the standpoint

[6] *Ibid.*, p. 8.

of a behaviorist would have us believe. And sex emotions, however understood, become later on the touch-offs of the gonads and of the interstitial glands. How are these reflexes to be conditioned so as to act in response to something besides tickling, shaking, gentle rocking, patting and turning upon the stomach across the attendant's knee? They are not to be conditioned at all. The behaviorist wants to condition fear and rage as much as possible, but he advises that love be left where we find it soon after birth.

"In our opinion," says Dr. Watson (still in this same book) "conditioned love responses [i. e. responses awakened otherwise than directly through the aforementioned zones], especially those directed [towards] father and mother, breeding too great dependence upon parents as they do, are probably the most sinister factors in the whole system of human organization." And he laments the fact that such conditioning is not only tolerated by society, but actually encouraged by it. This is a most melancholy philosophy, and seems to put masturbation above marriage.

And what of the future? "The research psychologists in the infant-behavior laboratories, once they are established, will in time learn how to remove these conditioned emotional reactions."

No doubt parents frequently do make their children too dependent. So Dr. Watson advises that babies be hard-boiled; for the conditioning which he objects to takes place, according to his own account, chiefly during the second year.

A certain physician in a once-notorious book, entitled *"Les Civilisées,"* insists that another of the characters, generally considered much debauched, is entirely normal

and healthy, *"parce qu'il ne cherche pas les femmes que par le coït."* Our leading behaviorist is more civilized still, for he says: [7]

"In observing the two-year-old only child brought up by an unscientific mother, we find that the child cries unless held in the lap of the mother . . . will sleep only when in bed with the mother. . . . Verbalization [speech] begins: it clusters around the mother just as . . . manual and bodily activity clusters around the mother. In a similar way the gut reactions have their center of reference in the mother. Manual, verbal and emotional reactions are tied together by this one, all-exciting stimulus,"—the mother, to wit.

Which means that the gut-reactions, or the stir of the unstriped muscles along the intestinal tract, are what the child feels when it loves its mother, or would be if it could feel anything; and that if the mother be not scientific and careful, there is apt to ensue a "conditioning" likely to depose the gut from its position of supremacy. Unless the behaviorists can save us, our native, purely physical, almost mechanical lust runs the danger of being swallowed up by sentiment and affection.

This danger has been avoided in some parts of the world. Katherine Mayo, whose book, "Mother India," has received deserved attention, says that the "whole pyramid of India's woes, material and spiritual poverty, sickness, melancholy, ineffectiveness, not forgetting the subconscious conviction of inferiority which [the Hindu] forever bears and advertises by his gnawing and imaginative alertness for social affronts," is due to an excess of tumescence, to sex dominant and rampant in Indian life.

[7] "The Myth of the Unconscious," *Harper's Magazine,* September, 1927.

She is not speaking of the India of dreaming, Vedantic philosophers, but of the real India of every-day life, which she has studied at first hand. There sexual impulses, indulged in upon a purely erogenous plane, are fostered and encouraged even by religion—by the Kali belief; by the "phallic cult for females"; by the training of girl babies so that they may become the playthings of the carnal passions of men. I do not see where we could find a better picture of what is likely to happen to us when Dr. Watson's "infant-behavior laboratories" once accomplish their task.

And now, having measured the loveliness of sex by the degree of excitement existing in the erogenous zones, Dr. Watson offers us another test for the excellence of conduct in general.

"In my opinion, one of the most important elements in the judging of personality, character and ability is the history of the individual's yearly achievements. We can measure this objectively by the length of time the individual stayed in his various positions—the yearly increases he received in his earnings. . . . If the individual is a writer, we should want to draw a curve of the prices he gets for his stories year by year. If from our leading magazines he receives the same average price per word for his stories at thirty that he received at twenty-four, the chances are he is a hack writer and will never do anything but that."

Bertrand Russell (upon whose authority I take this quotation) has tried to apply this criterion to "Buddha, Christ, Mohammed, Milton and Blake," and confesses himself staggered by the result.

It seems strange that Dr. Watson should have selected excellence in writing—even excellence marked in dol-

lars—as an instance of a workable, objective substitute for those old and by him discredited subjectivities, right and wrong. "A word," he says,[8] is just an explosive clutter of sound made by expelling the breath over the tongue, teeth and lips whenever we get around [near to?] objects." It does not appear how the clutter can be much improved when we express it in written symbols. In neither case does it mean anything.

"Meaning," according to "Psychology from the Standpoint of a Behaviorist," "never arrives in the scientific observations of behavior. . . . An animal or human being 'means' what he does." That is, he does not mean what he does. His doing is his meaning. If he makes a clutter of sounds, that is all there is to it. "It is often said that thinking somehow peculiarly reveals meaning. If we look upon thinking as a form of action . . . such speculations concerning meaning lose their mystery and hence their charm." [9]

"To answer what the church means to men," he continues, "it is necessary to look upon the church as a stimulus and find out what reactions are called out, [and] why. . . . This might lead us into folklore . . . into the influence of parents upon children, causing the race to project the father and mother into a heavenly state hereafter . . . finally into the realms of the incest-complex, homosexual tendencies, and so on."

I do not comprehend the "and so on." It would seem that we had already gone on about as far as we could go. This passage, unlike our speculations concerning meaning in thinking, has not lost its mystery. Its charm speaks

[8] "The Myth of the Unconscious," *Harper's Magazine*, September, 1927.
[9] *Op. cit.*, p. 355.

for itself. But one thing is clear. Thinking is speaking, and a word is an explosive clutter of sound.

Not always audible, however. Dr. Watson reduces the greater part of our thought to what he terms "sub-vocal speech." And Mr. Eggen agrees. "We do not think with our brain . . . we think with our muscles," he says.[10] The yokel, always suspected of thinking with his feet, thus comes into his own.

"Thinking," says the behaviorist,—and I now quote from David Wechsler, "Psychology as a Practical Science in Modern Life," [11]—"thinking is but a sub-vocal speech —that is, it consists of certain muscular movements of the throat and chest [like those observed in a semi-literate man when he is attempting to read to himself] which are not accompanied by the production of sounds." *Id est,* they are not *always* accompanied by sounds, and some of them are observable only by means of instruments. The child, we are told, begins by doing all his thinking aloud—but some of us eventually learn to do it without noise. Prof. Wechsler adds that the muscular theory of thinking is "not as far-fetched as it seems."

Why is it not? Because these sub-vocal movements seem always to be going on when we are thinking, and to some minds—or should I say muscles?—it seems logical to say that an accompaniment or a consequence is a cause. The same sort of sub-vocal speech will lead us to conclude that the foam in the wake of a steamer is what causes the vessel to go. I have often noticed that a little troupe of dogs usually accompanies Mrs. Belfeather in her walks in the park. I now learn that these dogs *are* Mrs. Belfeather.

[10] *Current History* for September, 1926.
[11] *Ibid.,* December, 1926.

That great psychologist, Eric Peters, once said to Chlorine Garnet, "I uses my eyes to see with an' my brains to think thoughts." [12] Evidently Peters is not a behaviorist. Neither was Shenute, who died in the year 451, famous for his anti-pagan propaganda among the Copts of Egypt. But he seems to have had some of our moderns in mind, for he said: "They also make the sound of birds, having filled books, for themselves and you, with vain words: Tinks! Tinks! Kwaks! Kwaks! saying: We are making the sound of birds."

"What possible good does it do," demands Dr. Watson,[13] "when discussing brick-laying or sub-vocal arithmetic to guess at what goes on in the synapse, in the efferent or afferent leg of the reflex arc, or in the muscle itself?" Such problems, he adds, "belong to the realm of physiology, and this section of physiology has not yet been written."

So he proceeds to write it, not as physiology, but as behaviorism. These "Kwaks! Kwaks! Tinks! Tinks!" and explosive clutterings of ours must be conditioned. And they begin to get conditioned the moment the parents begin to pay some attention to them—which usually happens without delay. Snoodlekins explodes, "Dada! Dada!" Paterfamilias is brought into the presence. Wrong! The explosions continue. A watch is displayed and dismembered. Wrong again! Then somebody hits upon the rag doll in the corner. It fills the bill. Silence reigns, interrupted only by goo-goos. And if the parents or other attendants did not afterwards undo this conditioning by beating upon iron bars or what not, and so insist upon

[12] "The Trained Flea," by Octavus Roy Cohen, *Saturday Evening Post*, December 17, 1927.

[13] "Psychology from the Standpoint of a Behaviorist," p. 372.

the rising generation adapting its language to the usages current among the old, "dada" would become the child's word for doll. This is a faithful translation into every day kwaks of what Dr. Watson says in the more refined tinks of the scholar, and I do not wish for a moment to deny that things happen much as he says they do.

But the point is, Snoodlekins discovers through the trial and error method that explosive clutterings of sound will cause things to move around the house. He finds that if he says "doll," slaves will hurry to place a doll in his hands. Does this not give the word a meaning, in the meaningful sense of the term? Does it not imply will and purpose upon the baby's part; consciousness, likes, dislikes; the ability to feel pain and pleasure; the desire to eschew the one and pursue the other? And do we not by implication admit similar intelligence and emotional capacity on the part of the parents and attendants? Otherwise why should they care whether a yell or a coo assaulted their ears?

"Every time I question young children, or even college graduates," Dr. Watson complains,[14] "I am struck by their dumbness." But surely they are not as dumb as this. By dumb presumably he means unverbalized, speechless. But of what use is speech to an unconscious, will-less piece of protoplasm without a mind? Can the imagination of even the least dumb among us see how or why a speech-mechanism has been developed and an almost infinite number of reflex arcs conditioned to respond to its innumerable demands if there be nobody anywhere in a condition to know whether silence or bedlam reigns?

Dr. Watson objects to the evidence of "journalists"

[14] "The Myth of the Unconscious," *Harper's Magazine,* September, 1927.

being received upon any matter involving human conduct, because they always make their depositions "in terms of some phases of the original nature of man." But nobody can say anything otherwise. A man born deaf could understand Beethoven's "Choral Symphony" in terms of acoustics, because on that side he would not be "dumb." But could he understand what it is which the world prizes in the melody that lifts up Schiller's "Ode to Joy" in the last movement? And yet acoustics explains everything in music—except the music. Trying to describe human conduct except in terms of the nature of man is like trying to dip a net into the sea without getting it wet.

"Consider for a moment what people mean, or at least should mean, when they say they are conscious or have consciousness," the "Myth" proceeds. "They mean, in the words of the behaviorist, that they can carry on some kind of brief sub-vocal talk with 'themselves' behind the closed doors of the lips." Do they, Dr. Watson? But what do you mean, "mean"? Have you not told us that "meaning never arrives in the scientific observations of behavior"? Have you not told us that we are nothing but a mass of reactions? Can one reaction "mean" anything to another reaction?

And why tell us that we "should" do this or that? You have given us only our "life history" as the determiner of our acts. That history found us with certain reflexes with which we had nothing to do; certain "situations" arose to which we automatically responded; our reflexes became "conditioned" in a way that we could neither help nor hinder. In "Psychology from the Standpoint of a Behaviorist" you say, "A host of stimuli act concurrently, but the organism reacts now to one, now to

another, depending upon which group of stimuli becomes preponent." It does not depend upon us, you see. The credit or the blame rests either with our original protoplasm or with the stimuli which have made up its life history. If slaves we were born, if in slavery we have grown up, you cannot set us free and make us morally responsible now by letting us talk a little sub-vocally to selves which do not exist.

Yet this is precisely what Dr. Watson attempts to do—or at least he warns us how helpless we will be if we don't learn to talk. The old Chinese philosopher, Lao Tse, once said, "Those who do not know, talk; those who know keep silence." Dr. Watson says, going on with his Myth of the Unconscious—calling it mythical because he prefers the no-conscious: "The child brought up in isolation or among taciturn parents or in groups where verbalization is frowned upon . . . can only act when brought face to face with objects in their appropriate settings." That is, he cannot think. "This is typical of the behavior of animals. It is typical of the behavior of many primitive peoples; of men like Jack Dempsey, Calvin Coolidge, or a great many athletes and acrobats." [15]

If the acrobatic, athletic, primitive, Dempsey-like Calvin Coolidge has to be content not to think of consequences it is no great wonder that we could not get Eliza logically and behavioristically across the ice.

[15] *Harper's Magazine*, September, 1927, page 104, col. 2.

CHAPTER III

DR. McDOUGALL'S X

I. AT THE BECK OF THIRTEEN MASTERS

DR. WILLIAM McDOUGALL, once of Oxford and Harvard, now of Duke University in North Carolina, came to America as one of England's leading psychologists. If he is less well known to the public than some other psychologists, it is because he is less eminently "verbalized" along the lines of gripping, every-day speech. As an example of his literary style, as well as of his philosophy, take his definition of Instinct.

"An inherited or innate psycho-physical disposition which determines its possessor to perceive, and to pay attention to, objects of a certain class, to experience an emotional excitement of a particular quality upon perceiving such an object, and to act in regard to it in a particular manner, or, at least, to experience an impulse to such action."

McDougall is nothing if not cautious. His subtile mind foresees every objection which can be made, and tries to forestall it. The result is a labyrinth in which even a professor, lacking a golden thread from the head of Ariadne to guide him, must—and does—frequently get lost. And yet all that this famous definition actually means is that we are born in such a way that we act in such a way.

As to whether the way is marked by physical roads or by roads which are something else; as to whether these roads are bequeathed to us by our ancestors, or whether we just have them, McDougall does not commit himself. But he implies that there is something in us which pays attention or does not pay attention, and that this something does not always follow a road even if it sees it. Sometimes it merely wants to follow, but forbears. Each road, we learn as we continue to read from this, his "Outline of Psychology," [1] has a lure of its own—as roads are apt to have—something which he calls the "hormic impulse," or "hormic faculty." And sometimes, instead of having it always acting from the roads themselves and moving us with a pull, he seems to think of it as in or behind us and giving us a push. In its latter position it can easily be mistaken for a will—even for a free will. To experience an impulse to act, and then not to act as the impulse would have you—is not that to be free to act as you like?

Yes; but what determines the like? Has the slave-driver gone, or has he merely stepped into the background?

A hormic impulse is a "striving" impulse. We are born with these impulses, therefore they are "instincts." William James gave us twenty-four—the instincts of climbing, imitation, emulation, rivalry, pugnacity, anger, resentment, sympathy, hunting, fear, approbation, acquisitiveness, kleptomania, constructiveness, play, curiosity, sociability, shyness, cleanliness, modesty, shame, love, jealousy, parental love. Dr. Watson says he has been able to find none of them. Dr. McDougall rejects some and discovers several new ones, leaving thirteen in all—which was for him an unlucky number.

[1] My quotations are from the edition of 1925.

Instead of being free, we have now thirteen masters, always wrangling among themselves, it is true, but never consulting us about their decisions. If we hesitate to obey one of them it is only because some other happens for the moment to be stronger. Or we are mastered by a combination; by a bloc. If we decide to move from the city to the country, it is probably a farm bloc. According to this theory, a sufficiently knowing person could calculate your conduct in advance.

Draw two straight lines of the same length, or of different lengths, as you prefer, from a single point; call that point yourself; let the direction of the lines represent the direction of the instincts, and let the relative lengths of the lines represent the relative strength of the instincts. If you then draw two other lines, each one parallel to one of the first two, and if you finally draw a diagonal from the original point to the opposite corner of the parallelogram you have just constructed, this diagonal will represent the action you will take when played upon by two hormic impulses at the same time.

But is this not free will, to do as you are moved to do? It was Schopenhauer, I think, who said that if a stone thrown through the air could be conscious, it would imagine that it was free; would translate gravity, momentum, resistance and the like into terms of personal desire. And it was Will Durant who, in his "Story of Philosophy," said that Schopenhauer was right. This, of course, is but another way of saying that free will is an illusion. It seems to come from within us, but in reality comes from without. And so it must be if we are the playthings of these hormic, instinctive impulses with which we are said to be born.

McDougall has specifically repudiated this interpreta-

tion of his theory. He calls himself a "Vitalist"; a believer in an active "life-principle," in something which, if not an actual soul, is at least a mind. But being an eminently fair-minded gentleman, he has been at pains to marshal together all the objections to his own views which he can think of, and he has proven himself to be a better enemy propagandist than defender of his own territory.

Thus C. E. M. Joad, a British writer, author of "The Babbit Warren," in his essay, "The End of Ethics," [2] compared McDougall to Watson and to Freud, and finds that one and all "preclude free will." And he adds: "Whether . . . the conscious will overcomes the unconscious desire, or whether the unconscious desire overcomes the conscious will, is a matter which appears to lie outside our control."

Mr. Joad does not go half far enough. Under the McDougall hypothesis, the conscious will overcoming the unconscious desire is a matter which can never happen. Will is merely the conscious result of a war of unconscious impulses. But he is quite right in believing that it makes no difference whether a striving be called an "instinct," as by McDougall; an "emotion-reflex," as by Watson; or a "libido," with or without a "complex," as by Freud. If we were born with it, or found it innate within us, or acquired it through circumstances not of our making, then we are its puppets or the puppets of its fellows. So Mr. Joad quite logically groups McDougall, Watson and Freud together as determinists, all the protests of the eminent English professor to the contrary notwithstanding.

McDougall nevertheless is possessed by an idea which negatives such a conclusion, negatives his whole philoso-

[2] *Harper's Magazine*, August, 1927.

phy; but he has never let it possess him wholly. That is why he has become so subtile, so difficult to read. Among those objects "of a certain class" which his thirteen innate or inherited instincts have moved him to pay attention to, is the materialistic physical science of the nineteenth century. And the conclusions of that science emphatically forbid the conclusion which he longs to arrive at in his own particular sphere. He wants to be free; to have a soul. And this old science tells him that he can't be free, nor have anything of the sort.

The trouble, of course, comes from the "law" of the Conservation of Energy—the idea that force is incapable of being either increased or diminished; that the amount of power which enters into anything is the amount of power which eventually issues from it, no more and no less. If will be anything but the net result of a group of pushes and pulls, it obviously contravenes this law by "creating" enough force to upset the balance—that is, unless we interpret the law very liberally and take it to mean that the sum total of the force of the entire universe alone is constant. In that case, if the will can smuggle in a little energy without having to pay for it, so to speak, it could be free to that extent.

The nineteenth century provided against this catastrophe by making matter indestructible. No particle of it was to be permitted to give up the ghost—a ghost which might be snatched by the will and used to wreck the materialistic machine. So even if matter had some energy locked up in it somehow, it was going to stay locked up. Those were the days of a static universe; of a world completely finished, set going and deserted by a God who had gone out of business and was never expected to return. And to prove it, scientists devised instruments, measured

the energy—income and output, found that the two balanced, and boldly announced that they always "must" balance.

Naturally, McDougall is not so crude as to accept either those experiments or those theories today. It takes a popular author to do that—one whose reading stopped or was curtailed many years ago. After saying that the only ground for doubting the freedom of the will is that offered by the strict determinists who contend for the universality of the Law of Causation—a dependent brother of the Law of Conservation,—after saying this, he boldly adds that this law "is not susceptible of being proved"; has "had its day"; and "is merely a clog on speculation."

Nothing could be more hopeful. We seem to be setting out on a magnificent, unincumbered highway. But McDougall is a born reconciler of irreconcilables. He can not abandon Conservation even after having repudiated it. Earlier predilections, no doubt, bar the way. So he seeks to retain both his Will and the Law which forbids it. Fit successor to James and to Santayana, he presents the spectacle of a house divided against itself. Yet he lacks the wistful melancholy of the unbelieving Catholic, who found the intellect so hard and dry and useless when made supreme over all, but strove faithfully to worship it nevertheless. Nor has he the reckless inconsistency of the unbelieving Protestant, James, who could say one thing heartily, and then, in another mood, say something quite the opposite—no less heartily.

McDougall is neither hearty nor melancholy. He has partially accepted Freud, and has worked in the same clinic with Jung. He is a psychiatrist. His important contributions to knowledge all deal with the abnormal.

He has studied insects and animals. But such thirst for the human as he owns to has been largely satisfied by his practical ministrations to the sick and semi-demented. Therefore he is able to weave his intricate patterns of words about the incompatible presumptions of his argument with a certain appearance of enjoyment, and seems to fancy that when the thread of the discourse has become sufficiently tangled it will have brought the incompatibles together.

"Resolutions of the will are not bolts from the blue," he asserts.[3] And he does not see that this commits him hopelessly to the mechanistic camp. For resolutions of the will must be bolts from the blue—just that, exactly—or they do not transcend the law of the Conservation of Energy. And if they do not add a jot or tittle by way of effect to what is already found in the cause, they are not free.

"Shall we say that Divine [clearly he means "human"] Reason sits at the head, controlling the fierce passions that reside in the belly as a charioteer controlls a team of savage steeds?" asks McDougall.[4]

"Aye!" cried the great Aristotle, centuries ago.

"Hardly!" exclaims our Carolina professor. "Reason is not a conative [i. e. striving] energy that may be thrown on this side or that in our moral conflicts." [5] "Reason is not that X of which we are in search, though it plays an important part in bringing that X to bear." [6]

It begins to have the interest of a detective story. X marks the spot where the Will is to be found—and if X is something superior to Reason, all the better. But it is

[3] "Outline of Psychology," p. 446.
[4] *Ibid.*, p. 439.
[5] *Ibid.*, p. 446.
[6] *Ibid.*, p. 440.

clearly asserted here that the Will is not the Reason; that Reason merely plays a part in bringing the Will to bear. That is, Reason guides, directs, aims the Will? No; for in such a case Reason would be the master, the mysterious Mr. X after all—which is contrary to the hypothesis. Is Reason, then, a channel of information, an open book where the Will reads the latest returns from the environment, so that there may be no action without knowledge? It looks that way for the moment. But McDougall goes on: "The X of which we are in search is always an impulse awakened within the sentiment of self-regard. It is the desire that I, the precious self . . . shall realize in action the ideal of conduct which it has formulated and accepted." [7]

So X is an impulse wakened within a sentiment, which [8] he tells us is the "most general term to denote all acquired conative (i. e. striving) trends." This makes X an impulse wakened within an acquired striving trend. And if we turn back to the definition of instinct we are reminded that a disposition to experience an impulse is an instinct, and therefore not acquired. So the impulse must have slumbered in a disposition before the sentiment within which it eventually woke had been acquired. X is also a desire belonging to an "I" which has formulated and accepted an ideal of conduct. Are we ringing the changes upon an octave of bells, or are we trying to say something?

Here we have Reason, Desire, Impulse, Instinct and Sentiment, not to mention Trend, all getting together and trying to make a Will with the help of an X and an I. We were out fishing, and just when the prospect

[7] "Outline of Psychology," pp. 140 and 141.
[8] *Ibid.*, p. 418.

Professor William McDougall
Are we trying to say something?

seemed encouraging for a bite of something edible, we catch a wad of verbal flounces, beneath which if anything be concealed it looks strangely like a gudgeon in the shape of Nietzsche's "Will to Power" rechristened as the Sentiment of Self-Regard. Or it may be the "libido" of Freud, or the "egotistic impulse" of Dr. Alfred Adler, of Vienna, which even Freud has denounced as "founded entirely upon the impulse of aggression," leaving "no place at all for love." It is a Will such as Dr. Watson might have made, had he been making one. But at least, you will say, it is a Will. Yet is it?

A Will must have power, else it cannot move at all. And it must have the direction of that power, else it has no choice as to the way in which it shall move. X, being an impulse and a desire, may be said to have power. But McDougall puts it within an acquired striving trend, and my dictionary tells me that a trend is an inclination to move in a particular direction—which is precisely what an instinct is. The channel, you will note, has already been dug. Whatever was acquired was foredoomed to be acquired. The ideal of conduct which the "I" formulated and accepted lay hidden from the first, with no possibility of its being rejected in favor of some other ideal. The "balance sheet" of the Law of Conservation has been retained, all protestations to the contrary notwithstanding.

McDougall has also attempted to make a Will out of attention.

Now attention is probably the slightest piece of luggage of all our inner impedimenta. It is such a little thing. It weighs almost nothing. Can't we get at least "attention" past the old-fashioned scientific custom-house without paying duty under the Conservation law? This looks at

first like a feasible scheme. But the customsmen are lynx-eyed. Once we submit to their jurisdiction they will let nothing pass, though it weigh less than the tiniest bit of fuzz off the end of a feather boa. Thus far McDougall has been held up as an undesirable citizen by these hoary custodians, and not allowed to land in Mechanistia. They have been alarmed by the suspicious manner of the traveler. But in thinking that he has any free will hidden in his theoretical baggage they are deceived.

This "interest" or "attention" with which we have to deal, is "conative." [9] And conation is "a convenient Latin word . . . to denote the striving aspect of the mental processes." [10] I am afraid that it is all it is, a convenient Latin word. For "instinct" too is a "direct conative trend." [11] Here we have two kinds of striving, only one of which is said to be direct, that is to have a direction. But this directed striving comes first; it is in-born, instinctive. Naturally so is instinct, "a disposition which determines its possessor to perceive, and to pay attention to, objects of a certain class." But in trying to find a Will it is precisely this determining which we are interested in. We don't care what makes the water run in the ditch, we want to know what digs the ditch. In McDougall it is always instinct. He has studied insects too much. He has seen too many lunatics whose wills were paralyzed. "Instinctively" he gives us only the mechanisms which he thinks he finds in grasshoppers.

Once, indeed, he does get up to the level of birds. On page 255 of the book [12] which contains the most complete expression of his theories, he says: "The only in-

[9] "Outline of Psychology," p. 274.
[10] *Ibid.*, p. 418.
[11] *Ibid.*, p. 418.
[12] *Op. cit.*

stance of pure cognition, as distinct from recognition, are those in which a creature is confronted for the first time with an object of the kind that evokes an instinctive reaction. . . . As when the hen nightingale hears for the first time the song of the male."

We are back to a first time, so for the moment are freed from habit. But "instinctive reaction" evoked by an object in the environment promptly takes us in charge. If the hen nightingale has no X, neither have we. She is merely a concrete example of the class "creature," to which we unquestionably belong. And obviously the hen can pay no attention to objects in which she has no instinctive interest, since it is instinct which "determines" the disposition to attend.

But what if the hen sees a snake as well as hears a song? Can reason dig a channel for her striving which will lead her to make a detour on her way past snake towards song? Is Reason the X? Impossible. "Reason is not a conative [striving] energy." Then it has no power, it cannot dig ditches.

It cannot even control attention, since that is the yes-man of instinct, the only thing having power which we have yet encountered. So if the hen nightingale decides to risk the possibility of laying unfertilized eggs rather than the possibility of making a snake's dinner—if she turns a deaf ear to the song of the male and simply goes away from there, it will be because her instinct of self-preservation proved a stronger and a quicker ditch-digger and trend-giver for her hormic impulses than did her sexual or maternal instincts. Or perhaps it was her instinct of self-regard which led her to take wing.

No doubt it will be argued that it was Reason which put before her the probable consequences of coming too

close to a snake, reason based on experience or observation. Let us suppose that Reason did have this information—though I don't see how a powerless reason could acquire anything,—what is it going to do with it? Call it to the hen's attention? It cannot. Her attention wears the shackles of instinct. She moves without waiting to know. Moving without knowing why is the very core of instinctive behavior.

And yet McDougall assures us[13] that "conative [striving] behavior is indicative of an energy that works teleologically [i. e. purposefully] and which is therefore radically different from the energies which physical science conceives as working always mechanistically." He loves to console himself with sentences like this one. We grow more rational and less instinctive as we grow older. How perfectly true. But McDougall brings it about by having Reason "waken" in a world where no energy is required to amass and classify data and then bring them to the attention of an X in the face of thirteen instincts which among them possess all the power there is.

If Reason only were a bolt from the blue! Or if X were such a bolt and could lend Reason a little current! But X itself wakens in a particular instinct, self-regard, and it is wakened by nothing. X does not mark the place where the will is to be found, it marks the place where the *body* is to be found. And what is McDougall's conclusion of the whole matter? What one might expect. "The stallion arches his thick neck . . . the bull bellows; the lion roars; the cat caterwauls; and the young man curls his mustache."

[13] "Outline of Psychology," p. 317.

2. PSYCHE WIELDS THE BROOM

In an unclaimed desert anyone may erect fences, but it is difficult to see how fences, especially when they are only imaginary, can earn dividends if they enclose no cattle. McDougall introduces us to a region where there is not even sand—only words. And nothing is required of these words, whether they be conveniently Latin or less conveniently English, except that they follow one another in grammatical order. He makes distinction after distinction; and as they are verbal distinctions merely, all that ensues when they contradict each other is a conflict like that of several contending currents of air.

We see now why Dr. Watson so much objected to the introspective method. In truth, "introspective" is an unhappy term. We may note what goes on inside of our bodies, and even of our brains to a certain extent; and give names to various thoughts, feelings and sensations, or to what we take to be such. We can tell in what order they occur. But this is not introspection in any literal sense, it is simply paying attention to things which are intimate and near. Actually to try to look inside of "ourselves," implies that "we" are standing outside and looking in—an impossible situation. Its physical counterpart is the attempt to roll the eyeballs so as to get a view of the interior of the skull—a performance not to be recommended.

The outer world, physicists tells us, is a "continuum," something all of a piece. A chair and the air around it are not so separate as one might suppose. It is the sense of touch and the sense of sight which distinguish so sharply between one and the other. Make the chair of glass, and the eye is not so certain. Lenses and mirrors can be so arranged as to project a visible chair which the hand cannot

feel. Make the chair of aromatic wood and the sense of smell will perceive it as pervasively emanating from a vague center yet permeating the whole room.

But in dividing such a continuum we have at least the warrant of our senses. We remain practical. When we attempt to divide up the continuum perceived only by the inner self, such guides are lacking. We have to depend upon psychologists. And if we try to go further and cut the inner self, itself doing the cutting, we only commit subjective *hari-kari,* the sensation of which is very uncomfortable. This is the sort of metaphysics which is indeed but methodical befuddlement. Yet it is practiced, not by metaphysicians but by men calling themselves scientists; men who profess for the most part to despise both metaphysics and philosophy—dogmatic men, who never lose an opportunity for expressing their horror of dogma. Such misbehavior entitles anyone to the title "misbehaviorist," whether he be a Watsonian or a Freudian, and McDougall, for all his agreeable manners, will have to be convicted.

R. H. Hingley, B.A., who signs himself a "research student in psychology, Edinburgh University," picking and choosing such verbalization as pleases him, even attempts to reconcile McDougall with the impalpable Boris Sidis. Hingley writes as a friend of the accused, and in his book, "Psycho-Analysis," proves it by defining "self-consciousness" as "a recognized and acknowledged synthesis of . . . impulses." [1] If that is all self-consciousness is, it is this same familiar nothing with which we have already had so much to do. Can you imagine a "synthesis" as existing by itself? In the case of gin, perhaps, for the atoms in synthetic gin are real

[1] "Outline of Psychology," p. 18.

atoms in good standing in their several communities brought together by no fault of their own. Nor even yet do they exist as gin except as there is something outside of themselves capable of conceiving of them as gin. They belong to the physical continuum—and generally it is safer to leave them where they belong.

I won't ask what is to be expected of a synthesis of McDougallian hormic impulses. Another verbal whirlwind threatens to blow, and it will be better to keep out of it. But let us make a synthesis of matches.

Arrange a number of matches on the table before you so that they form a cross, a star, or any other geometrical figure. Then sweep them up in your hand and forget all about it. Where is the figure now? What has become of it? Have you at last succeeded in defying "natural law," and annihilated something? No; the figure did not exist, as a figure, except in you. And if some trace of it be not in you now, as an "unconscious idea" or what not, it can be nowhere. It was only a form, and form is an entity only by grace of the perceiver of form.

It was you who perceived certain relations among the matches. The relations were not in the matches. Unless the matches managed somehow to get outside of themselves, they had no idea that they were parts of a cross, a star, or a triangle. And when this form is "destroyed" they are conscious of no loss. Now a self, or a self-consciousness which is only a form made out of the things which constitute it and not perceived by anything else, is less a self than a piece of bread rubbed on the outside of an empty closet door is a cheese sandwich.

This habit of playing with words signifying a multitude of things conceived of as a unit, is evident in all the literature of mechanist thinking. As soon as such a word

is found, the group of things is treated as if it were a force, an entity, or even an intelligent creature standing on its own legs. And usually the things in the groups are also but words.

Dr. McDougall, for instance, says that a man in the presence of a great work of art is being played upon by a "fusion" of the "instincts" of "curiosity" and "wonder," fused in their turn with the instinct of "submission." It is a predicament in which no one should lightly wish to find even an art critic.

But if we have thirteen instincts, why not fourteen? Why not the whole twenty-four listed by James? Why not twenty-five? If I can be played upon by a fusion of curiosity, wonder and submission, all instinctive, why cannot I be played upon by the instinct to light my pipe at three o'clock in the afternoon of Friday, the Thirteenth of January? Think of a self-conscious synthesis of unconscious impulses being played upon by a fusion of unconscious determining impulses wakened in an innate psycho-physical disposition to pay attention!

But let us abandon the materialistic hypothesis, however disguised. Let us say that it was Psyche who built her house, not the house which built Psyche—and how the situation changes! She cannot have built it out of nothing, it is true. So let Dr. Watson give her a dwelling with only the foundation reflex courses laid, or let Dr. McDougall escort her into a completely and instinctively furnished apartment. In either case, she begins at once to make alterations, for she is a "choosy" woman, this Psyche of ours. She has power in her right arm, and does not care a tinker's dam about the conservation of energy.

So she proceeds in her disposition to pay attention to objects "of a certain class," and totally to ignore others.

Things progress from a "predominantly mechanical to a predominantly teleological determination." Pure instincts, the original furnishings of the flat, become modified by experience and rational reflection. Dr. Watson[2] says "there is no mystery in building the human being into as complicated an organism as he is." Avowed mechanists are never tired of telling us this, and they are right. There is no mystery at all—save in Psyche herself. And she is all mystery. I would no sooner think of trying to explain her than I would think of explaining myself. For she *is* myself. And she and I, like Drs. Watson and McDougall, are totally inexplicable. Not even we understand in the least.

What is explanation? Let us explain a sunset. It is caused, we will say, by the earth turning upon its axis, so that the sun, which at noon was overhead, seems to sink to the horizon. Actually, it is the horizon which rises and obscures the sun—no matter. The rays which were perpendicular, become slant. They encounter drops of water in the atmosphere—encounter too the laws of refraction, and break up into gorgeous yellows and purples. Follow the rays in one direction, and you come to the "rods" in the eye; the optic nerve; the brain; and to Something which translates the result into the color sensations, and these, perhaps, into a fusion of wonder, curiosity and submission—and these into a lot of theories.

Follow the rays in the other direction, and you arrive at the sun, and are tempted to construct various theories of light. Whence came the sun? Whence came these primal particles or protons of which it is theoretically composed? We know of the sun's existence only from what

[2] "The Behaviorist Looks at Instincts," *Harper's Magazine*, July, 1927.

Psyche perceives—through her senses or otherwise. Imagine that neither Psyche nor the sun exists. Start now and try to imagine yourself creating either or both. Why, you cannot even make a beginning. You have nothing to imagine with. You are lost between the impossibility of existence and the impossibility of non-existence. Did you ever stop to think how utterly impossible is either of these two opposite impossibilities? And yet—here we are!

Explanation, then, consists in nothing but the addition to one mysterious experience of Psyche certain other mysterious experiences which precede, accompany or follow it. And as they usually precede, accompany or follow in much the same order, we call them causes, controlling circumstances, and effects. But instead of explaining the mystery away, we have merely heaped Pelions and Ossas of mystery all about it. And so we often manage to hide it, and to fancy that there is no mystery at all. Would it not be wholesome exercise occasionally to admit openly that we do not know what we are talking about? Why not for once exclaim with Dr. Bertry, in *"L'évasion,"* by Brieux, *"On 's imagine savoir des millions de choses!—on veut formuler les lois de la vie—et l'on assiste impuissant à sa propre agonie!—Nous ne comprenons rien à tout ce qui se passe autour de nous, rien à ce que se passe en nous"*?

So far as the mind is concerned, this is undoubtedly true. The mind can know nothing of the proper essence of that which surrounds us. The mind, says Newman, cannot comprehend even its own activities to the full. So we "do but assist at our own agony. . . . Why is it that I die? The scelerose invades the arteries. Why? What is the scelerose?" And Dr. Bertry continues: "Do you

wish me to tell you? We know nothing about it—nothing! We have found nothing about it—but words."

That is no reason, however, why we should use yet other words to create mysteries of our own—like the unconscious emotions of Dr. Watson, or the enslaved freedom of Dr. McDougall. And this is my answer to those who will object that my explanation, too, is incomprehensible. Its incomprehensibility comes from the facts, not from my contrivance. The metaphor of Psyche grants the natural mystery by making our inner self a human being, which, after all, is what it is. And with this for a start, the reason can work—at the only job for which it is fitted.

It does not follow that Psyche discovers nothing which is of any use. Knowledge is relative, but Truth is not—Pragmatism or no Pragmatism. And she soon discovers, let William James have said what he may have said, that it makes a great difference whether her approximations are more or less wide of the mark. Which is to say that she profits by experience. Her original house does not suit her. She makes certain rearrangements. They suit her better, but not to perfection. She continues to rearrange and to build, with such material as life affords her. That, I fancy, is what she is here for—to learn how to keep house. For though the house be not Psyche, any more than your house or your body is you, do not think for a moment that it is useless. As well say that the parallel bars in the gymnasium are of no use to the athlete for whom they afford the opportunity of exercise.

Scientists at one time used to exercise—not their powers of observation, but their verbal ingenuity—upon a

set of bars of their own which they called the psycho-neural parallel, saying that inasmuch as two parallel lines can never touch, so neurology and psychology, nerves and mind, matter and the immaterial, can never influence one another. According to this theory, there were two eternally separate twins dancing along, each on its own line of the parallel, forever aping each other as our reflections ape us in a mirror. And it was strictly forbidden to cross the track!

The materialists have repealed this "law," on the ground that there is no psychic rail out of which to make the right hand parallel. Others would repeal it, saying that there is no left-hand rail. The rails are there, nevertheless. What is not there nor anywhere is the prohibition against crossing. The idea that the immaterial cannot influence the material because spirit and matter are things of different orders comes from the same sort of logic as would maintain that waves cannot rock a boat because wood and water, too, are of different orders of things.

But, think you, this is merely human experience and common sense, not science? That there is no Scientific Psyche? That the idea of there being somebody at home within us is a sweet but forbidden doctrine; something forever outlawed by the experimental method? On the contrary, it was the experimental method which first made us aware of this state of things. And the experimental method in its most modern, scientific form, politely lifts its hat to the Housekeeper whenever she appears. It was only during a decade or two—the decade or two when most of our psychologists were young and learned all they ever did learn of physics—that science forgot her manners. If you want to be in style, do not continue to

wear your hat in the house. In the best circles it is no longer done.

We are not ready yet, however, to enter the best circles. We have first to pass through the fires of passion, of madness and dreams.

CHAPTER IV

A SLAVE TO DREAMS

I. THE CONFESSIONS OF SIGMUND FREUD

PSYCHO-ANALYSIS, we are told by Hingley[1] began with a "very interesting case of hysteria" suffered by a patient of Dr. J. Breuer, of Vienna. Sigmund Freud, then a young man, was in Paris, studying with Charcot at the Salpêtrière. The patient lost the use of the right arm, lost the power to drink; but recovered both when Dr. Breuer, resorting to hypnotism, revived the memory of a painful experience in the patient's childhood.

Mesmer, with his magnetic fluid and his "passes," had almost been forgotten, but in France the hypnotists of the Salpêtrière were still battling against the "suggestion" school of Nancy—as in deed they are today. Here, therefore, was a case after Freud's own heart. He hurried back home.

The two doctors worked for a while in harmony, and soon arrived at the conclusion that to cure hysteria it was not sufficient to revive the past. Patients must re-live the painful experience in all its original emotional intensity. Thus the ground was prepared for the later Naturopaths, who insist that one must have all one's diseases

[1] "Psycho-Analysis," by R. B. Hingley, B.A.. Edinburgh, second edition, 1922, p. 17.

over again in inverse order, avoiding remedies as these merely "suppress the symptoms."

But some people have had diseases which they do not care to have over again, and prefer suppressed symptoms to almost any other kind. So Naturopathy has had a hard row to hoe. At first there was the same reluctance on the part of the public in regard to painful emotional experiences. Not until Freud, abandoned by Breuer but accompanied by a disciple named Jung, visited America in 1919, was sales-resistance finally overcome. By this time it was generally known that, though the method was called the "cathartic method," no cathartics were used; and that the "painful experiences" to be re-lived were all sexual experiences, painful only in a Pickwickian sense.

For he came with the announcement that there was within each one of us a bogie, or endo-psychic censor, which prevented us from dwelling with any real enjoyment upon the more unsavory episodes of the past; that it was this spoil-sport which made us ill; and that it could be put to rout by "Psycho-Analysis."

Soon it was discovered that an outer censor, familiarly known as Anthony Comstock—a rather ignorant gentleman with the annoying habit of sending policemen after those who published what was, in those days, quaintly termed "pornographic literature,"—could be floored by the same means. Psychology was not "literature." Therefore it could not be "pornographic literature," within the meaning of the law. The Venusburg *motif* shivered with joy. The Pilgrim's Chorus sank to a gruff base. So the Austrian became a best-seller, out-vending even Havelock Ellis, who had previously had our perversions pretty much in his politer charge. Dr. Breuer, on the contrary, clinging to hypnotism, which Freud had discarded, and

more or less discarding the eroticism to which Freud had nailed his colors, sank back straightway into his native oblivion, a warning to all.

It need not be thought that the cathartic method did us no good. The United States, just emerging from the taboos of Queen Victoria, was in need of hyssop. Some of us, brought up among tables and chairs having limbs in lieu of legs, were really in a bad way. But Freud has become much more than a physician. Through books which sell in hundreds of thousands, he seeks to officiate as a pedagogue, a scientist, a philosopher and a priest.

Therefore it may not be amiss to enquire into his antecedents and his character, and then to ask ourselves what his teachings amount to as theory and how they influence our lives if put into practice.

In order to be perfectly fair, I shall confine myself almost exclusively to the analysis of a single book, the master-piece into which he has put his most fully elaborated and carefully worked out speculations, "The Interpretation of Dreams," using the third edition of the authoritative English translation of A. A. Brill.

This work, whatever it may be as psychology, is certainly one of the greatest autobiographies in existence; for in it Freud not only tells us his dreams—which alone would tell us nothing—but the incidents from which he deems the dreams to have sprung, and the thoughts and memories which his study of the dreams have brought to mind. It is a method to be recommended for those who wish to stand quite naked before the world. By the time he has done, not even Rousseau or Benvenuto Cellini are better revealed.

"When I was six years old," he writes,[2] "and was re-

[2] "The Interpretation of Dreams," p. 172.

ceiving my first instructions from my mother, I was asked to believe that we are made of earth, and that therefore we must return to earth. But this did not suit me, and I doubted her teaching. Thereupon my mother rubbed the palms of her hands together—just as in making dumplings, except that there was no dough between them—and showed me the blackish scales of epidermis which were thus rubbed off as a proof that it is earth of which we are made. My astonishment at this demonstration *ad oculos* was without limit, and I acquiesced in the idea."

And so, in maturer years, when he came to dream of a woman rubbing her hands together, the incident was recalled, and he identifies the dream woman as one of the Fates!

For once his conclusion is not far-fetched. One of the Fates, indeed! To speak his own jargon, it may have been from those blackish scales of epidermis that he received the psychic blow which resulted in his life-long anti-religious mania. His love of God (he once used to read Philippson's Bible, and to dream of the illustrations) was made ashamed by this ridiculous demonstration *ad oculos,* and forced out of consciousness. The course of history was turned on a certain famous occasion by the cackling of a flock of geese. It might have been turned again by the timely use of a cake of soap upon a maternal epidermis.

Freud describes the inability of a child to detach its "libido" from the parent whom he asserts first awakens it, as a "mother-fixation." His own mother-fixation takes the following startling form:[3] "It is only of late that I have learned to value the significance of fancies

[3] *Ibid.,* p. 244, note.

and unconscious thoughts about life in the womb. They contain the explanation of the curious fear felt by so many people of being buried alive, as well as the profoundest unconscious reason for the belief in a life after death, which represents nothing but a projection into the future of this mysterious life before birth. The act of birth [he means the act of being born] is the first experience with fear, and is thus the source and model of the emotion of fear."

Here emerges his marvelous gift for the enunciation of inconsistent formulas. Birth, the "first experience with fear," is the "source and the model of all fear." Yet it is the pre-natal life, which knew no fear, which is the source of the fear of being buried alive. Moreover, unconscious thoughts about this happy life *in ventro* have but to be projected into the future to become the source of a belief in a life after death—a belief which is fraught both with fear and hope to all those who entertain it.

Then, to make his inconsistency complete, he maintains (in his essay on "The Anxiety Neurosis," and in many other places) that "neurotic fear has its origin in the sexual life and corresponds to a libido which has been turned from its object." From what object? One of the erogenous zones. Birth thus ceases to be the source of fear—at least of "neurotic" fear—unless we assumed that it was a the moment of birth that erotic passion was first awakened.

Dr. Ernest Jones, in *"Zur Psycho-analyse der Kriegsneurosen,"* says that all fear is due to suppressed libidinousness, but adds that fear consists in anxiety lest the suppression be overcome and the erotic demon escape control. The natural hero, then, would be the man who either had no erotic impulses or was indifferent as to when

and where and how they manifested themselves. Freud, perhaps, agrees with this. Yet evidently, like Hamlet (to whom also he attributes a mother-fixation) he still carries with him another fear—a "fear of something after death," an apprehension of such "dreams" as may come in such a "sleep," baffling all psycho-analysis and worse than the delusions of a suppressed libido—and this notwithstanding the blackish scales in the demonstration *ad oculus* and the incredible reasons which he gives for his "symptom."

Freud hates to abandon anything altogether. He likes to keep a little fear, a little shame—not enough to control conduct, but just enough to lend a thrill to transgression. "The original situation which calls out the observable love-responses . . . the stroking or manipulation of some erogenous zone, tickling, shaking, gentle rocking, patting and turning upon the stomach across the attendant's knee," would become intolerably monotonous if sought to be prolonged for a lifetime. Anatole France's penguins were not "excessively occupied" by it even after they became human, before they learned to wear clothes. Dr. Watson, could he really prevent other stimuli from being "built in" or "grafted upon" this unconditioned reflex, would reduce all love-interest to that seasonal intermittance owned to by the beasts of the field—with what consequences to the film industry, who can say? Freud, though he prefers the words "mother-fixation" to "gut-reaction," and "polymorphous perverse" to "unconditioned reflexes,"—to say nothing of "original sin" —agrees perfectly with the behaviorist as to what the natural stimuli are and that they should be spared all interference. But he can never quite get over the idea that, though natural, they are wrong. He speaks sometimes

of "pollution" and of "filth." The love-adventure thus becomes as exciting as a pact with the devil. At the same time he drives us to it with the threat of psycho-neurosis and possible paralysis if we refrain. In his hands, psychology becomes an aphrodisiac.

From this same autobiography we learn that he was once actually in a grave, though only "an empty Etruscan grave near Orvieto." And when he dreams of death, it is, he sometimes thinks, from a wish that *if* he must go ("if" is the word he uses!) it may be to a grave something like this "pleasant one."

For a moment one thinks that the uterine obsession has abated. Yet I remember that somewhere he explains that the fondness of youths for flinging themselves down in the open is due to the fact that the ground is "the womb of mother earth," and to a longing for return—whether in a fœtal or other capacity I do not recall. The Etruscan tomb-dream is not so pastoral as it seems.

"Dreams which are conspicuously innocent," he warns us,[4] "invariably (sic!) embody coarse erotic wishes." Note the word "coarse," a term of condemnation. And yet if we refine them we go mad!

He can look forwards at times, for he asks,[5] "Is not the having of children the only access to immortality for us all?" Which is certainly an inadequate—no man really "lives again" in his children—yet a better explanation for the general belief in immortality than the extremely psycho-analytic idea that it comes from thoughts and memories of the unborn state. But the mother hypothesis seizes him again when he comes to interpret dreams "about landscapes and localities in which emphasis is

[4] *Op. cit.*, p. 241.
[5] *Ibid.*, p. 388.

. . . laid upon the assurance" that one has "been there before." For he adds, "the locality [indicated] is always the genital organ of the mother."

Freud was born in a little village of Moravia, "inhabited by Slavs," and "must have understood the Czech language during the first three years of childhood." Until the end of his third year, his "inseparable" companion was his nephew, John, a boy about a twelvemonth older than himself. John occasionally took advantage of signority, treating the future psychiatrist "very badly"; and the memory of this association has, in his own opinion, "colored" Freud's relationships with people of his own age ever since.

He had, when he was fourteen, the pleasure of playing Brutus to the hated and beloved playmate's Cæsar—not in Shakespeare's drama but in Schiller's poem—the audience being composed of children. Long afterwards he dreams of the event, and connects up the "associations" in characteristic style. The dream-month, it seems, was July—named after the mighty Cæsar himself. Which leads him at once to Brutus' speech in Shakespeare: "As Cæsar loved me, I weep for him; as he was fortunate, I rejoiced at it; as he was valiant, I honor him; but as he was ambitious, I slew him." So old scores are evened, if only in that thing less than a dream—dream-analysis. Freud's favorite method of taking revenge is in his sleep.

Yet there is a certain truculence in his waking character too, a *Schlagerfertigkeit* which he acknowledges to be his. This seems to owe its origin not so much to the teasing John as to a conversation which took place when Freud was ten or twelve. His father was telling him how, in his own youth, he was walking on a Saturday through a street in the village where Freud was born.

"Along comes a Christian," says the father to the boy, "knocks my cap into the mud with one blow, and shouts, 'Jew, get off the sidewalk!'" Sigmund asks, "And what did *you* do?' his eyes big with wonder and the hope for some happy issue. But the father answers simply, "I went into the street and picked up the cap."

Here was born another complex—this time an inferiority complex—with which all right-minded persons must sympathize. Stoutly has he sought to fight it off, to assert himself. But it is easy to see how he has been hurt by the anti-Semitic feeling which from time to time has disgraced Austrian politics; how he hates the white carnations that, in Vienna, are the insignia of the Jew-baiters.

But with what gusto he tells us of the old peasant midwife who assisted at his "first experience with fear" and prophesied, after the manner of her kind, that he would become "a great man!" His father, not to be outdone, was of the opinion that he was "poetically gifted" from the start. The idea of anticipated power may also lie behind the fact that the favorite toy of his babyhood was a yellow porcelain lion. And were I to follow his own method of the free association of ideas yet further, I might suggest that it was this lion which afterwards led him to visit England.

In any case, visit England he did, when he was nineteen, and spent a day on the shore of the Irish sea, amusing himself by catching the "sea animals" left behind by the waves. A pretty little girl, seeing him engaged with a starfish, approaches and asks, "Isn't it alive?" He answers in halting English but correctly enough, "Yes, he is alive." And now the adult Freud must needs spoil this idyl by explaining that he was much embarrassed by his grammatical "mistake," and hastened to substitute an

it for the *he*, fearing that the slip of the tongue in dealing with gender had already betrayed the improper meaning which in his thoughts he had attached to the masculine pronoun. Really, at times Freud is quite intolerable—and he seems to fancy, even yet, that he improved matters by his "correction" of himself.

Since visiting England, he has always wanted to visit Rome, but has never done so, pretending to himself that Rome is not healthy in summer, the only time he is free to travel. He knows quite well that this excuse is about a hundred years out of date, but appears to be prevented by a complex from entering the Eternal City. For Freud, all roads lead to sex, and no road leads to Rome—which becomes quite understandable when we learn that for him Rome meant Catholicism. And when he tells us further that he often dreams that he is Hannibal, whom he identifies as Judaism, he makes it plain that with him it is *aut Cæsar aut nullus*. He would like to enter Rome as Hannibal the Semitic commander, would have liked to enter it—in the rôle of conqueror. At present the Pope and Mussolini stand like inhibitions at the gate.

At one time in Vienna he lived in a house having one set of rooms upon the ground floor, serving him for an office, and a second set upon the story above, where he had his domestic quarters. The two levels were connected only by an outside stairway, and it was his custom always to "jump over the steps," two at a time, arriving at the top suddenly and out of breath. And from this he derives his unrepeatable description of the symbolism of staircases as seen in dreams, where he gives them a sexual, even a rhythmic, significance.

It is also his custom, it appears, not only to run up stairs but to spit upon them as he goes. He does this, he

says, even in the houses of patients unless spittoons are provided at convenient intervals. And on the occasions when he has been reproved by servants, he has always been able to retort that a spittoon was missing.

As to his wife, we learn that he "kept her waiting five years" before he married her, but derived great satisfaction from the circumstance, soon evident, that the marriage was not to be unfruitful. And, being on a visit to Breslau and seeing the sign of a "Dr. Herrod" in an office window, he at once cried out, "I hope he is not a children's specialist!" Since then Freud's most likeable trait has been his anxiety over the future of his offspring. He seems to have worried, both sleeping and waking, because of the fact that, as they are Jews, he cannot give them "a native country of their own."

Concerned lest one of his sons should grow up one-sided either in mind or body, he dreamed that the boy said at first "salted" and then "unsalted." This, he assures us, was a wish-fulfillment, because in the dream at least the boy was acting "in obedience to bilateral symmetry."

Freud's incredible ingenuity never fails him. Nor is he, except when discussing metaphysics, lacking in abundant wit, humor, and other amiable qualities. He says that he will put in italics all the features of a certain young lady's dream that have a sexual significance—and follows this up with two solidly italicised pages and no other remark.

He tells with glee how a lady in the audience at one of his lectures in America interrupted him by exclaiming, "Maybe all Austrian dreams are erotic, but I am sure it is not so in the United States."

He is suffering from a boil, which had been poulticed, and dreams that he is in a saddle riding a horse, the poul-

tice being the "day-remnant" now transformed into a saddle. He declares that the dream (which, among other things is "the guardian of sleep") meant to say to him, "Keep on sleeping. You have no furnucle [boil] at all. You are riding on a horse, and with a furnucle where you [think] you have it, riding would be impossible." [6] This also means that his friend, F., has been putting on airs, "riding the high horse" with him ever since he (Freud) superceded him in the treatment of a particular female patient. So the saddle becomes a side-saddle to indicate the lady, and the dreamer performs circus antics upon it as a dream-boast of the great things he had been doing for her while she was under his care. And to those who object to the super-abundance of his "associations" he retorts that it is always the rich who have the most money.

Real money he seems to regard as "filthy lucre," since he holds that "the uncleanliness of childhood is often replaced in the dream by greediness for gold." His stout republicanism comes out in his statement that "aristocrats can be readily confounded with coachmen," that their merit is "that they have taken the trouble to be born"; that "to us middle-class plebeians" an aristocrat is one who likes to put himself "on the driver's seat," as Count Thun once liked to drive the Austrian car of state.

Much light is thrown upon the author's environment, perhaps even some justification to be found for his American auditor's exception to the inclusion of the United States in the all-erotic hypothesis, by such remarks as the one which distinguishes page 462: "That the sexual intercourse of adults appears strange to children who observe it, and arouses fear in them, *I dare say is a fact of*

[6] *Op. cit.*, p. 195.

daily experience." This, as they say in Vienna, must have been "grown on his own manure." I have added only the italics. It also reminds one of a Hungarian proverb which Freud is fond of quoting, "Pigs dream of acorns, geese of maize."

In his part of the country, he informs us,[7] "It is hardly possible to go through a village . . . without meeting a two-or-three-year-old tot who lifts up his or her shirt before the traveler, perhaps in his honor." And lest there be any doubt about the sort of life with which Freud is familiar, his translator takes the trouble to note[8] the custom of *Fensterlein* as practiced in the Schwarzwald. Lovers there, he says, are in the habit of mounting by ladders to the windows of their sweethearts, and "becoming so intimate that they practically enjoy a system of trial marriage." And he adds, "The reputation of the young woman never suffers on account of *Fensterlein* unless she becomes intimate with too many suitors."

Still, it is hardly fair to single out the Black Forest, which after all is not Vienna. Even the Welsh have their *carangwelly*; Irving found evidences of bundling in the history of Father Knickerbocker; and companionate marriage knows how to speak English.

Freud himself has become a linguist, partly through searching for the "bad" sense of words in all languages, partly by looking for puns, the pun being one of the tools with which he digs out "meanings" from his patients' dreams. A great mass of knowledge is required to trace some of these word-plays. For instance, a dream of a botanical monograph leads from cyclamen to cocaine, from cocaine to a *Festschrift,* and thence to Dr. König-

[7] *Op. cit.*, p. 106.
[8] At the bottom of p. 171.

stein, to Prof. Gartner and his *blooming* wife whose name is Flora, to Freud's wife and her favorite flower, to his own favorite flower (the artichoke) and thus to Italy. To dream that there is "a terrible storm outside" may mean that somebody is superfluous, for everything is overflowing with water, "with fluid,"—"superfluid"—"superfluous."

"People who dream often of swimming, of cleaving the waves with great enjoyment, have usually been persons who wetted their beds, and they now repeat in the dream a *pleasure* which they have long since learned to forego." This also seems superfluous.

He accuses people who form collections of neckties of using this bit of haberdashery as a sex-symbol. Nothing in Freud is harmless, though he professes that his constant digging for muck sometimes wearies him. Thus one day after a lecture upon the usual subject he felt a longing to get away "from rummaging in human filth," and was reassured only when a student followed him to a café and told him that he was a great man. Filth and greatness are again associated in his dream of being Gulliver and cleansing a foul closet by the means used by that famous traveler in putting out a never-to-be-forgotten fire in the queen's palace at Lilliput. In the same dream he became Hercules cleansing the Augean stables.

Naturally he reads Rabelais; but he has also read C. F. Meyer's "*Die Leiden eines Knaben.*" And when Louise N., a visitor to his home, asked for a book, he recommended Rider Haggard's "She," "which deals with the eternal feminine," and the Haggard-Lang romance, "The Heart of the World," which he attributes to Haggard alone. This may indeed be the eternal feminine, but it has at least undergone a charming sea-change—"she-

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change," Freud undoubtedly would say. Strain a desert and the lions remain. Strain Freud, and if sex does not remain nothing does—except his wit. After all he is no *Deutzenmensch,* not of the sort who come in dozens, and is always rich enough, at least in humor, to be able to ask the price of Graz.[9]

He adores the tale of the husband who said to the wife, "If one of us dies I shall move to Paris." And the story of the dreamer, who, when asked "Are you asleep?" answered "No"; but at the words "Then lend me ten florins," promptly responded, "Yes, I am asleep." But some sexual implication of a sort lower than animal is liable to germinate, whatever the occasion, and rise, as he would say, "like a toadstool from its mycelium" to poison the air. In Vienna they employ an art called Gsnas, which consists in making "something valuable out of trifles." Nothing valuable comes from the Freudian Gsnas, unless you count a bad conscience which uses vestigial inhibitions merely to heighten tumescence.

He confesses that he was once "a green youth, full of the materialistic doctrine." [10] What he does not seem to realize is that he has never recovered from this adolescent characteristic. But it is always a relief to turn from his "interpretations" to the honest facts of his life—to read that he once spent a "charmingly beautiful day" with his wife looking from the window of a hotel (evidently the Danieli) on the riva Schiavoni, at Venice, watching the English warships that were taking part in a *fiesta*; and to know that his wife was interested in the toilet-table of an "Etruscan lady" in a Venetian museum. It was

[9] "What is the price of Graz?" An expression used by the Viennese when they wish to boast of wealth.

[10] *Op. cit.,* p. 179.

"a rectangular black object with two handles, with little boxes for rouge and powders," and the *gnädige Frau* "thought it would be nice to have in the house." By rare good fortune, Freud failed to dream of these little boxes, or at least forgot to mention it if he did.

Upon a less happy occasion he becomes so vexed with Mrs. Freud that when she gives him a book as a present he immediately forgets it—thus living up to his absurd theory that we only remember things which have agreeable associations. Then his "beloved mother" falls sick, and his wife takes such "tender care of her" that the domestic breach is healed. So the victim of amnesia suddenly recovers his memory, and walks straight to the lost book, "like a somnambulist."

One likes also to turn to the amusingly recounted hardships of his student days, and to learn that the five years provided for the study of medicine was "as usual" not enough for the future great man. So he "worked along unconcernedly," though "considered a loafer" by his associates, who doubted if he would ever "get through." He had intended to study law, but was moved to take up science upon reading Goethe's "beautiful essay on Nature." He never did get through very far, and failed in his examinations for the degree of Doctor of Legal Medicine. Consequently, when he dreams of examinations the subject is invariably botany, zoology, chemistry or history —it being another of his contentions that no one ever dreams of examinations excepting those in which one has succeeded. On the other hand, one dreams only of the trains which one has missed, such dreams being "consolation" dreams, directed against the fear of dying. One missed the train—that is, one did not "depart," did not die. Railroad travel seems to be dangerous in Austria.

Freud always wanted to be "a professor *extraordinarius,*" but was held back by the fact that he was a Jew in a country where appointments were in the hands of Gentile politicians. By way of compensation he is now a doctor of laws, *honoris causa.*

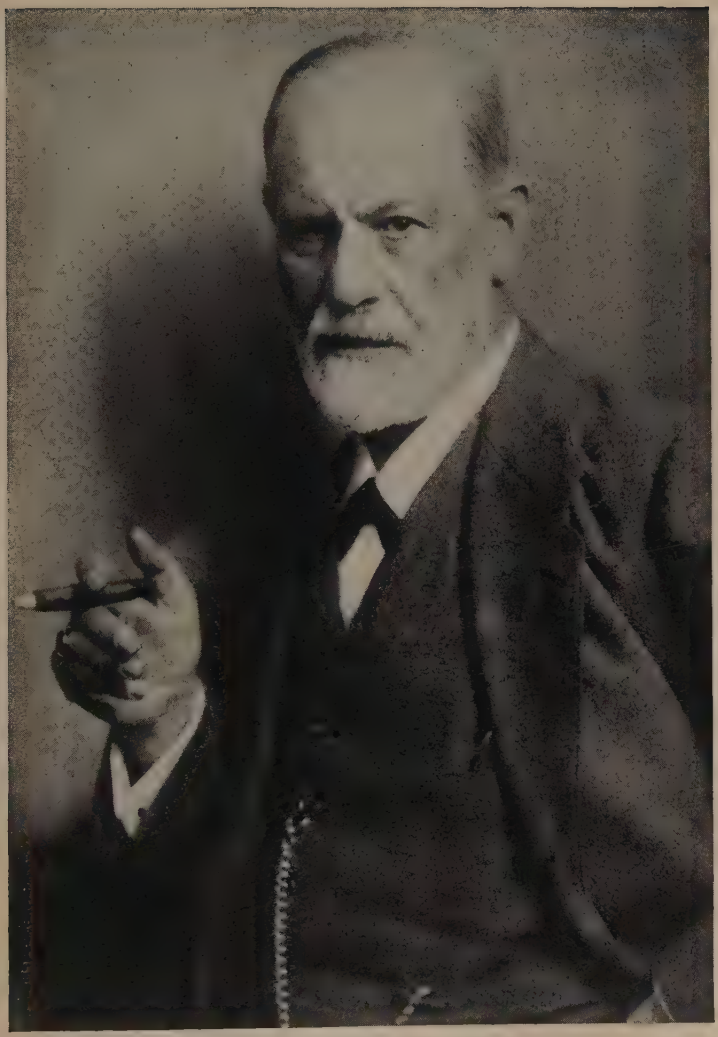
But first, what struggles! The "honored teacher" of his youth was Bruecke, who in his age had eyes which were "wonderfully beautiful," yet was a terrible fellow in his prime. One morning Freud, then a demonstrator at the Physiological Institute, came late to work—and the eyes, not yet so beautiful, turned to a "terrible blue," and before their glare the hapless demonstrator "melted away." But Bruecke has his day; he dies. And Freud takes characteristic revenge by dreaming that he denounces him as a ghost before a group of living people with whom the deceased was presuming to mingle as an equal.

It is interesting to note that "the first scientific task" at which Bruecke set him "was concerned with the nervous system of a fish—the Ammocœtes." [11] Have we here the origin of the Freudian philosophy? It seems to me so, but perhaps this is merely because I have recently been reading Roland Pertwee's inimitable "Fish are Such Liars," in *The Saturday Evening Post.*

2. THE ELABORATION OF A FICTION

But it is time to leave the fascinating subject of Freud the man and turn to Freud the psychologist. Everybody understands his psycho-analysis in a vague, general way, but I know of no one who has ever taken the trouble to reduce its chaos to order and so expose the kind of "logic" which rules it. His disciples merely choose such bits as

[11] *Op. cit.,* p. 325.



DR. SIGMUND FREUD
He tells us his dreams

please them, add a rhetorical pæan, and say, "This is Freud!" Others skip all but the salacious passages. Let us take it fairly, the lean and the fat together. After all, it is important. For if this theory be "true" we must submit to it though the heavens fall. We are not "irrational" I hope.

Psycho-analysis is based upon six main assumptions, but even assumptions deserve for once to be stated in plain language.

First Assumption: That we are born with a certain equipment, called the Primary Psychic Apparatus, or the Unconscious Mind. This is much like the "Instinctive" apparatus of McDougall, or the "Unconditioned Reflex" apparatus of Watson. It has a certain resemblance to the Old Adam of popular speech, with that Flesh which was formerly associated with the World and the Devil. It is Psyche's house as originally bequeathed to her.

"We have elaborated the fiction of a primitive psychic apparatus whose work is regulated by the efforts to avoid accumulation of excitement," says Freud.[1] "For this reason it was constructed after the plan of a reflex apparatus. The accumulation of excitement is perceived as pain and sets the apparatus in motion in order to reproduce a feeling of gratification in which the diminution of the excitement is perceived as pleasure."

This "fiction" then is Oriental. Pain is positive, pleasure merely the diminution of excitement. The logical procedure would be to get rid of such an apparatus, if in no other way then by committing suicide. But later we shall learn that notwithstanding its perception of pain and pleasure, the apparatus is unconscious. Freud and Watson together give us a no-conscious, an uncon-

[1] *Ibid.*, p. 474.

scious, and a pre-conscious, and not a bit of consciousness in any of the three.

Second Assumption: That as we develop under stress of circumstances,—conform to our environment as a Darwinian would say, or in other words become educated —we develop a Secondary Psychic Apparatus whose emotional reactions are different from and often in opposition to the emotional reactions of the first. This is the non-instinctive, reasonable, or acquired mental equipment, the conditioned reflex system—what we ordinarily term our second nature. Freud divides it further into the Pre-Conscious and the Conscious—and here at last we become really conscious. But we shall be "compelled to build a series of new assumptions concerning the structure of the psychic apparatus," he informs us.[2] And here they begin. "From the moment that we wish to penetrate deeper into the psychic processes . . . all paths lead to darkness." [3] The darkness is about to be ours—darkness abundant, Stygian, Egyptian; darkness which may be felt.

Third Assumption: That, owing to the emotional differences of the two psychic systems, the Second System offers a resistance to the desires, thoughts and memories (all unconscious) of the first. "Whenever a wish-fulfillment is unrecognizable or concealed, there must be a present feeling of repulsion towards the wish, and in consequence of this repulsion the wish is unable to gain expression except in a disfigured state." [4] It is this resistance which he personifies as the Endo-Psychic Censor and imagines standing like a watch-dog at the threshold

[2] *Op. cit.*, p. 405.
[3] *Loc. cit.*
[4] *Op. cit.*, p. 120.

of the pre-conscious. He even imagines a second censor standing at the threshold of the conscious.

Everybody must admit that this resistance, personified or otherwise, is a fact. The adult does acquire a distaste for childishness. He at times exercises upon himself a sort of discipline. He has different inclinations which are at war with one another. Freud's contribution to psychology at this point consists in the discovery that such discipline is a perilous thing to indulge in. For—

Fourth Assumption: A desire so disciplined does not cease to exist, but continues in being. The opposition of the Secondary Apparatus causes it to be forgotten, to became a part of the unconscious. But there it remains, "suppressed" but biding its time.

These unconscious wishes "suffer the same form of annihilation as [do] the shades of the lower region in the Odyssey, who awoke to new life the moment they drank blood." [5] Shall we then keep them away from blood? That is not the programme. But for the moment Freud merely says: [6] "Nothing can be brought to an end in the unconscious; nothing can cease or be forgotten." Adding: [7] "I believe that these unconscious wishes are always active and ready for expression—the as it were immortal wishes from the unconscious."

This implies that a wish cannot be deflected, but persists as a desire for its original object—which is totally contrary to reason and common sense, to experience, and to physical science. It is the same as saying that a boy who was looking forward to a Saturday afternoon visit to his grandmother's grave and was induced to go to the circus instead, would—especially if he suppressed his

[5] *Op. cit.*, p. 439, note.
[6] *Ibid.*, p. 456.
[7] *Ibid.*, p. 439.

cemeterial inclination to the point of not telling the fellows about it—straightway forget everything but the circus, and yet be haunted by an unconscious desire for the grave. Nor could anything but a conscious visit to the scene of interment (or to a psycho-analyst) ever set the desire at rest.

Such a suppressed, abashed and forgotten but far-from-done-with desire is called a "complex." There are many complexes, but they all reduce themselves to two, the Œdipus and the Inferiority. Let us pause to consider them before going on to other suppositions.

3. TWO OFT-THWARTED PASSIONS

An inferiority complex originates in a blow to our self-love, to our sense of personal regard. And as Dr. McDougall is the most eminent godfather of this instinct, we had better go to him for a working example.

A famous architect visits his alma mater after many years of successful post-graduate life. Suddenly he begins knocking men down right and left, shouting, and trying to climb over the head of the bed in spite of the efforts of three attendants to hold him within bounds. An old-fashioned expert would have pronounced him a paranoic, a megalomaniac, or something equally disagreeable. But Jung, McDougall's one-time co-worker, was called in. He said that it was only a case of schizophrenia, and that what the patient needed was—not a straight-jacket but a quiz.

By "free word-association" (Jung's personal invention) it was discovered that the schizophreniac had once been jilted by a fair co-ed at the dear old school, and had quite sensibly forgotten all about it. But when he re-

turned to the scene of his adolescent chagrin, it all came back—the very campus seemed to him suddenly to sway beneath a purple sea of emotion. He thought that the fair one was not really married to another after all, notwithstanding rumors which he had heard to that most likely effect, but was still waiting for him—waiting until he should prove himself a man. So he commenced knocking other men down. Proof enough. He even added song and gymnastics by way of good measure; and a second attack, like the first but milder, occurred upon his next visit to the fateful place.

What had happened (internally) was this. The co-ed had given him a mental traumatism, a blow upon the solar plexus of his vanity. And he was so shamed that he could not bear to think of it. So he put it from his mind—as he fondly thought. But alas, there is no such thing as putting anything from one's mind. Things so put only go into the unconscious mind, there to fester like a potato in a damp cellar. The psychiatrist digs it out, and all is well. This is the story as set forth (in quite other language) in McDougall's "Outline of Abnormal Psychology."

Unquestionably it is a great discovery—that we are not always crazy when we appear to be. Introverts, schizoids, dreamy people (you may have your choice of terms) are especially to be congratulated. For they are apt to find themselves battling suddenly with a suspiciously insane looking bosom monster long hidden from themselves —the battle resulting in hysteria if they give way and in compulsion-neurosis if they resist. If one happens not to be a schizoid but an extrovert—that is, a commonplace, practical sort of person—a bad inferiority-complex merely leads to multiple personality, a splitting of in-

dividuality into parts, one of which may go about calling itself Smith, another Jones, another Brown.

But what shall we do with our famous architects, introvert or extrovert, when they begin to misbehave along non-professional lines? McDougall quite rightly attributes the cure of the one in question to Jung's showing him just how ridiculous he had been in laying the co-ed's treachery so much to heart in the first place. He need not have been so rich in false pride, Jung seems to have told him; need not have been ashamed of being jilted. Into each life some rain must fall. His was but the common fate of all men in general and of undergraduates in particular. He should have laughed the incident off, or perhaps have sought relief in another bite from another vampire, on the homeopathic principle of *similia similibus curantur*. What he had needed as a child was not the indulgence of self-esteem, for life is not always kind, but early preventative measures tending to curb self-esteem's abnormal growth.

One may agree with the diagnosis and treatment of this case without difficulty. It was not a Freudian case. The wound was only remotely sexual, and McDougall manages to ignore its erotic elements altogether. He is always the Dr. Jekyll of the couple of which Freud is the Mr. Hyde.

Jung, for some reason, also enjoys a Jekyllian reputation, but he hardly deserves it. Indeed, he frequently out-Hydes his former teacher. For Freud observes that the "significance of sexual complexes must never be forgotten, nor must they, of course, be exaggerated to the point of being considered exclusive." [1] Jung on the other hand writes (I am certain of his words but have for-

[1] "The Interpretation of Dreams," p. 240.

gotten the book and the page), "I am often asked why it is just the erotic complex rather than any other which is the cause of the neuroses. There is but one answer. No one asserts that this ought to be the case. . . . But as a simple matter of fact, it is always found to be so, notwithstanding all the cousins and aunts, godparents and teachers who rage against it."

In another place, Jung declares quite sensibly that the real cause of trouble is "the non-fulfillment of life's task." He is, it seems, so anxious not to be lost beneath the shadow of the master that he seeks to outshine him even in the production of self-contradictions.

What chiefly distinguishes this noted citizen of Zurich, however, is the vast array of complications which he has added to the map of our psychic "localities" by drawing in the "archetypes . . . the great primordial images"; the "collective unconscious" (inherited or innate tendencies of various awesome shades); the "Persona," or mask beneath which the developed self timidly confronts the world; the "Anima," or submerged personality; the "Kabyr," or undeveloped intuitive premonitions, and many other romantic features whose names seem to have been taken from the Egyptian Book of the Dead. Yet his attempt to write as picturesquely as Freud is a failure, like his endeavor to evolve an independent philosophy. Jung is merely Freud, McDougall, and water. His principal Avatars in this country are Dr. Maurice Nicoll and Dr. Constance Long.

And now for the Œdipus Complex.

"King Œdipus, who has struck his father, Laius, dead and has married his mother, Jocasta, is nothing," says Freud,[2] "but the realized wish of our childhood. . . . His

[2] *Op. cit.*, p. 224.

fate moves us only for the reason that it might have been ours, for the oracle has put the same curse upon us . . . as upon him." He adds that, unless we have become psycho-neurotics, we have since "succeeded . . . in withdrawing our sexual impulses from our mothers and in forgetting our jealousy of our fathers,"—and presumably we have withdrawn, too, from the cousins, aunts, godparents and teachers listed by Jung. If these impulses have found their way into the unconscious, however, they must have become eternal. Psycho-analysis drags them into consciousness, not to kill them but to give them a transfer. The patient, it is said, always falls in love with the operator as a half-way step on the road to cure. But in regard to "falling in love with one member of the parental couple and hatred of the other," Freud does not think that "psycho-neurotics are . . . sharply distinguished from ordinary human beings." [3] The only way to preserve normality, then, without calling in the doctor, would be never to lose consciousness of our original polymorphus perversities.

In such a case, how is a transfer to be brought about? Not by discipline, evidently. Considering the dire horrors said to lie in the wake of any attempt to thwart the perversities in question, the natural conclusion is that children should just grow, like Topsy, without having to suffer the stern and perilous ordeal of being brought up. And does not such a scheme leave perversity in control?

Certainly the effect of the study of Freudianism everywhere has been to make parents afraid of resorting to corrective measures when their children are "naughty." A stern word, let alone a sound spanking, may (according to the Freudian theory) cause a suppression of desire,

[3] *Op. cit.*, p. 221.

a thrusting of a native impulse into the Sheol of the lower psychic locality, "where . . . wishes . . . recall the legendary Titans who from time immemorial have borne the ponderous mountains which were once rolled upon them by the victorious gods, and which even now quiver from time to time from the convulsions of their mighty limbs." [4]

Must one, then, totally abstain from mountain-rolling for fear of earthquakes? A boy's "libido" is first excited by his mother, so that he wants to murder his father because the fellow is this woman's husband and the boy would like to be her husband himself. Is this to go on? And of the two ways out of the situation, which shall we chose? Let the boy murder the father? Or shall we let him marry the mother? It seems to be a Hobson's choice. We do not want to run the risk of creating a "complex" by harshly thwarting either of these amiable desires, for a complex, Freud assures us, may produce psycho-neurotic symptoms ranging all the way from a mild hysterical excitement to paralysis, blindness and homicidal mania.

If there happens to be a daughter born in the family before the murder can take place, another difficulty arises. For the daughter's "libido" will be excited by the father even as was the son's by the mother. So the girl will want to kill her mother for being the wife of the father—will want to become her own father's bride. In case all these instincts are given sway, there will be two murders; but where are the weddings coming from? The boy now has no mother. His sister has murdered her to get her out of the way. And the girl has no father, he having been murdered by the jealous boy. Brother and sister have nobody left but each other. Ergo, they should make the

[4] *Ibid.*, p. 439.

easiest transference available, and live happily ever after.

In some instances, due to circumstances over which the infants have no control, the libidos may not reach out to the parent of the opposite sex, but attach the daughter to the mother and the son to the father. But this only complicates the situation. The murders will take place as before, the murderers' parts being merely exchanged, and in the end brother and sister will be left as before, the sole survivors of the massacre. And in this case they will have especial difficulty in making the necessary libidinous transference. They have, through some accident in the nursery bringing similars instead of dissimilars together in the field of desire, become homo-sexual. The future of the race is threatened. Either that, or we must run the risk of a race of maniacs by teaching the young that some things are—not "unspeakable," "unverbalizable," or "unthinkable," but shameful—murder and incest being among the number. If they cannot endure the shock of such knowledge, driven home until it becomes effective, so much the worse. Freud leaves the prospect gloomy indeed. And yet David Seabury, author of "Unmasking our Minds,"—Seabury, whom William James is said once to have dandled on his knee—endeavors to convince us in an article entitled "The Bogey of Sex," [5] that Freud has spent his life in beautifying and ennobling human love.

Beautiful and ennobling or not, the assumption that a desire and its first object are a pair of Siamese twins incapable of separation, is the very father of fallacies. Nor does it become more reasonable if by object is understood a class of objects. In either case desire in general is cut up into particulars, each one deathless and indomitable. Why should those who deny free will to the individual

[5] *The Century Magazine,* September, 1927.

be permitted thus to attribute all powerful will to his several reactions?

Freudians always instance hunger as an example of a persistent desire. You want your dinner, they say, and you go to the theatre instead of dining. You forget all about food, but you still continue to crave it; and when the show is over you discover that you are starving. Incidentally, this desire persists even if not driven into the unconscious by shame beyond hope of easy recall—which somewhat enlarges the hypothesis. A further enlargement is made with the admission that the hunger here is not a desire for turkey, or for chicken, but merely for food.

Now it must be admitted that the Freudian supposition so understood has the superficial appearance of truth. In a case of this sort it does look as if only a limited transference were possible. One dish may be served in place of another, but unless we eat we continue to be hungry. But do we?

Had Freud known anything about fasting, had he been a good Jew and kept the Passover, he would have learned that the symptoms soon cease. The sensation of hunger is produced by certain tensions in the stomach. The glands containing the digestive fluids are distended. The forces designed to attack the food are mobilized, and where the food should be yawns only emptiness. But soon the digestive fluids dissipate themselves; in the course of a few hours the last feeling of appetite is gone. One does not have to be a Dr. Tanner to be aware of this. Many people have gone without food for long periods, and with little or no suffering or ill effects.

It is not pretended that we can go without food forever. The body cannot be altogether ignored—not by the

majority of us; and one must remember the farmer's horse, who, taught to live upon one straw a day, was so inconsiderate as then to die. But even with this, the most fundamental and imperative of all the desires, discipline may operate to a great extent. Gluttony is not a *sine qua non* of health. Indeed, if no discipline be exercised there is likely to ensue—if not psycho-neurosis at least another and most distressing symptom, known as gout.

And how is it with sex-hunger? This not being actually necessary to the preservation of the earthly life of the individual, is even more amenable to the curb, and may be divorced altogether from its carnal object. We are certain of this because it has been done and is being done in innumerable instances.

I am not claiming that sex should be suppressed by cold negation, any more than I hold that one ceases to be hungry if one has nothing to do but think about dinner. But there is such a thing as sublimation, which may be defined as a transference of libido upon such a broad and magnificent scale that we may say not only that one object is substituted for another but that one desire is substituted for another. Thus lust—and I use the word without implications of the unnatural—may be overwhelmed by love, and a lower love by a higher.

Even without going very high we find that the ardently moved members of the endocrine system at times cease to trouble in the absence of exterior physical stimuli, and a different type of autocoid than the burning one makes its appearance in the blood-stream. Those who pretend that lack of indulgence perpetually increases the store of sexual desire and capacity, conscious or unconscious, run the risk of being likened to that boastful bridegroom so inimitably described by Montaigne, who, because of the

sheer extravagance of his claims, was eventually adjudged "unfamiliar with the practice" under consideration.

A particular wish, then, is a wish with a direction—a direction which may be changed. The belief that a grown man has an unappeased longing to be fed once more at the breast or the bottle—a longing suppressed in his primary psychic apparatus—deserves itself to be classed as a psycho-neurotic symptom.

And now we may resume our suppositions.

4. MORE SUPPOSITIONS

Fifth Assumption: That dreams open the road for the discovery of festering wish-thoughts in the unconscious.

"The dream is the distorted fulfillment of a suppressed wish. . . . The wish manifested in the dream must be an infantile one." [1]

The ingenuity which our author has expended in the attempt to prove that "dreams are never nonsense" passes belief. To begin, he makes a sharp distinction between "manifest" and "latent" content, between the dream as it appears and the dream as it secretly is. Then he divides the modes of disguise which this latent content or meaning of the unconscious mind adopts in sneaking its obscenities past the censor for the production of the manifest dream-show into three categories: (a) Condensation; (b) Displacement; (c) Regard for Presentability—which means presentability in pictures or symbols. The word "distortion" sufficiently covers these three processes. Then there is a fourth category, (e) called Secondary Elaboration.

"A psychic function which cannot be differentiated from our waking thoughts may make contributions to the

[1] "The Interpretation of Dreams," p. 136.

dream content. . . . It is an expression of the *esprit d'escalier* on the part of the psychic censor. . . . The result is that the dream loses the appearance of absurdity and incoherence [given it by distortion] and approaches the pattern of an intelligible experience." [2] That is, we half wake up, and give to the manifest dream a specious logic —which the psycho-analyst warns us to ignore.

Now it is clear that the principle of symbolical interpretation, if once admitted, will open wide the gates for whatever "meanings" it is necessary to find in order to establish the general theory. For these are not "arbitrary" symbols, like "those used in stenography." They are such symbols as may be taken from "folk-lore," or any other available source, their meanings loosely worn. All that is required of them is that they shall yield a general sexual significance whenever sufficiently squeezed.

For example,[3] an "intelligent and refined young lady" related the following dream to Freud: "Her husband asks: Should not the piano be tuned? She answers: It won't pay; the hammers would have to be newly buffed."

This, we learn, "repeats an actual event of the previous day,"—for in every dream there is a "day-remnant" to furnish stuff for the manifest content, as well as a suppressed infantile wish to give it its real "meaning," and some of this remnant at least must relate to the waking experiences of the past twenty-four hours. Once we grasp the general idea, we shall see meaning after meaning, each one deeper than the preceding, revealing itself like so many skins peeled from an onion.

The lady's husband had actually asked her about the piano; but that, being real, amounts to nothing. What is

[2] *Op. cit.*, p. 390.
[3] *Vide* p. 155.

more significant is that the lady, lying upon Freud's couch and relaxing, refers to the piano as "a disgusting old box," and says that it was one of the things which her husband had before his marriage.

The outer onion-skin has now come off. But it promises to be so unsavory that we would better drop this particular bulb and take up another. For dream onions are not only laminated, but there are always several onions to every dream. Let us regard the one from which sprang the phrase, "It won't pay." The outer skin here was a visit the patient had made the day before to a lady friend who asked her to take off her coat; but as she had to go in a moment she replied that it would not pay. And here again I am forced to drop the subject, or at least to avoid the line of thought which is immediately suggested by a knowledge of the symbolism here involved. Freud himself takes a new lead by remarking that during a previous analytical séance this same patient *had* taken off her coat, "a button of which had opened,"—taken it off with a gesture which seemed to say, "Please don't look in this direction; it won't pay." From which he concludes that among the many things which "disgusting old box" refers to is "chest," or "bust."

Were this lady but an American we might now conclude (without exaggerating the Freudian procedure in the slightest) that this means "Pike's Peak or Bust"; that this in turn recalls a bust which she went on when she was younger and in the neighborhood of 142nd street, New York, locally known as "Pike's Peak"; that the peak of her ambition was to marry a Jew—with incidentally a hidden desire to be peeked at; and that because of her failure to realize these wishes she was piqued, and suffered accordingly.

But as she seems to be an Austrian we must be content with the idea that "the interpretation of the dream leads directly to a time in her bodily development when she was dissatisfied with her shape." She wanted to be fat—an eminently Austrian thought. And from here we are led to a yet earlier period. For the words "disgusting" and "bad tone," make it necessary, Freud informs us, to remember "how often in allusions and in dreams the two small hemispheres of the . . . body take the place—as a substitute and as an antithesis—of the larger ones." That is, the piano was a dream disguise for the buttocks.

It now hardly seems necessary to remark that "the dreamer, owing to a peculiar set of circumstances, may create for himself the right to use anything whatever as a sexual symbol." [4] Still less to add that, generally speaking, "all elongated objects, sticks, tree-trunks and umbrellas, all sharp weapons, knives, daggers and pikes," are masculine symbols; while "all little cases, boxes, caskets, closets and stoves" have a feminine signification; or that "stairways, stairs, ladders . . . or anything analogous to them" are to be regarded as specifically erotic suggestions. And to make the system complete, whenever a symbol refuses to fit in with the desired significance, we are at liberty to regard it as "misplaced emphasis" due to distortion, and to interpret it in an opposite sense. So pain may mean pleasure, and a crowd a secret.

Nor is even this enough. He goes on and invents a veritable grammar of dreams. Logical connection (in the latent content) is rendered (in the manifest content) by simultaneousness; causation is expressed by succession; "either—or" by "and—and" (you dream of both alternates as being true); similarity or agreement is pictured

[4] *Op. cit.*, p. 246.

by the concentration of several images into a fantastic unity, etc., etc.

Freud commits the common and fatal error of proving too much. He should have been warned by the fate of the late Ignatius Donnelly, once Lieutenant-Governor of Minnesota. Donnelly, having shown that Bacon wrote Shakespeare's plays, went on to show that he also wrote Burton's "Anatomy of Melancholy" and Bunyan's "Pilgrim's Progress." And having discovered that these works had all a sort of sense when read from left to right, proceeded to demonstrate (in "The Great Cryptogram") that they had an even better sense when read more or less from right to left.

Using the Freudian premises, we are forced to conclude that the average child's aversion to the multiplication table is a blind to cover his unconscious but shamefaced eagerness for illegitimate parenthood. The very name, "Multiplication," gives us the key. Freud has met this objection by saying that he does not permit himself to wander at random over the field of conjecture, but is always guided by a principle. What principle? That dreams come from suppressed erotic desires—the very principle he is trying to prove. No, the court does not admit evidence at random, it measures it by the supposition that the defendant is guilty.

The Multiplication Table is quite admissible, for dreams are not the only things which may be subjected to dream-analysis. Waking thoughts are interpreted in the same way. If a patient refuses to dream, the analyst pounces upon his inventions, his replies to questions. The "Œdipus Tyrannus" of Sophocles and Shakespeare's "Hamlet" fall naturally into the dream category.

"We are far too much inclined to over-estimate the

conscious character of intellectual and artistic productions," since "from communications of some of the most highly productive persons, such as Goethe and Helmholtz, we learn that the most essential and original parts in their creations came to them in the form of inspirations and reached their preceptions almost finished." [5]

But though a dream can compose a "Hamlet" or an "Œdipus," it cannot compose a speech. "No matter how many speeches and answers may occur in dreams, analysis always shows . . . that the dream has only taken . . . fragments of speeches which have been delivered or heard." [6] What, then, is this dreaming faculty which is at once so competent and incompetent? Is it a gift, or a disease?

"A dream," says Freud, in the Introductory Remarks to the book we have been following, "is the first link in a chain of abnormal psychic structures whose other links [are] the hysterical phobia, the obsession, and the delusion." Then on page 482 he declares, "The dream is not a pathological phenomenon and does not leave behind [it] an enfeeblement of the mental faculties."

Those whose mental faculties have not been too much enfeebled by the attempt to reconcile these two statements, may try their logic's teeth upon page 437, where it is said that "in view of the complete identity [to be] found between the peculiarities of the dream-work and the psychic activity forming the psycho-neurotic symptoms, we shall feel justified in transferring to the dream the conclusions urged upon us by hysteria." Or one may turn to page 471, and read: "It is condensation that is mainly responsible for the strange impression of the dream, for

[5] *Op. cit.*, p. 486.
[6] *Ibid.*, p. 329.

we know of nothing analogous to it in the normal psychic life accessible to consciousness." Remember, too, that Freud does not think that in regard to "falling in love with one member of the parental couple and hatred of the other," psycho-neurotics are "sharply distinguished from ordinary human beings."

Now if you are not very sharply distinguished from ordinary human beings you naturally indulge in "typical dreams,"—the dreams that everybody has. And among typical dreams is the Œdipus dream of the death of parents or other near relatives. But here a difficulty arises.

"These dreams show the very unusual case where the dream-thought, which has been created by the repressed wish, completely escapes the censor, and is transferred to the dream without alteration." [7] Is the theory then at fault? No; but the censor is. "There is no wish which we believe further from us. . . . The dream censor is therefore not prepared for this monstrosity, just as the legislation of Solon was incapable of establishing a punishment for parricide." [8]

Objections to the Freudian theory are vain; the theory bends to accommodate whatever it encounters, then straightens out and goes its way as if nothing had happened.

If we are consciously anxious about our dear ones, the wily unconscious merely takes advantage of that fact to stage a dream about somebody's death, well knowing that the conscious anxiety will blind us to the deep-down truth. But there is consolation in the thought that "if someone dreams . . . that his father or mother, his brother or sister has died," Freud does not "use the dream as a proof

[7] *Ibid.*, p. 226.
[8] *Ibid.*, p. 226.

that he wishes them dead *now*. . . . The theory of dreams . . . is satisfied with concluding that the dreamer has wished them dead . . . at some one time in childhood." [9] And to console us still further, he adds (p. 214) that a child has no idea "of the terror of the Infinite Nothing."

Pursuing the infinite nothing of this now happily satisfied dream theory, we discover that "dreams of the death of parents predominately refer to that member of the parental couple which shares the sex of the dreamer," except, of course, in the case of the homo-sexual. Or, "to express the matter boldly, it is as though a sexual preference becomes active at an early period, as though the boy regards his father as a rival in love, and as though the girl takes the same attitude towards her mother . . . a rival by getting rid of whom he or she cannot but profit." [10] Dr. Watson, though he knew not the reason, was certainly right in saying that bringing up children was a perilous business. What else would the fate of Laius and Jocasta lead us to expect?

To put the matter beyond doubt, Freud cites the case of an eight-year-old girl of his acquaintance, who, if her mother happens to be called away from the table, reveals her psychic enormity by saying, "Now I shall be Mamma. Charles, do you want some more vegetables?" [11] Freud is not a man to be deceived by the seeming innocence of play. And he blames "that sanctity which we have ascribed to the injunctions of the Decalogue" [12] for the dullness which keeps us from perceiving the incestuous and homicidal tendencies of our young.

It may be admitted that "no other impulse has had to

[9] *Op. cit.*, p. 211.
[10] *Ibid.*, pp. 216–217.
[11] *Ibid.*, p. 218.
[12] *Vide op. cit.*, p. 217.

undergo so much suppression from the time of childhood as the sex impulse";[13] and, the parental instinct of self-preservation being what it is, the fact is not surprising. And these suppressive tactics seem to have been in vogue from the earliest times. "The obscure and primitive ages of human society give us an unpleasant idea of the power of the father, and the ruthlessness with which it was used. Kronos devours his children as the wild boar devours the brood of the sow; Zeus [in the role of retributive justice] castrates his father . . . and takes his place as ruler."[14]

Now, as I remember this legend, Zeus operated with a sickle—an immemorial image of Time. And as Kronos is himself a symbol of Time, I long supposed that here was a figurative way of saying that Time (Kronos), which devours all things (his children), shall himself eventually be devoured, as it were by himself—the sickle. But evidently the theory of dreams cannot be satisfied by symbols when they are used to interpret mythology.

Evidently, too, the time has now arrived in this, our Freudian era, for Kronos to suffer again and as literally as before, notwithstanding the "frantic attempts" of modern parents to hold on to "whatever remnants of the . . . *potestas patris*" remain. The newspapers certainly chronicle occasional incidents of this childish rebellion, if not of the frantic efforts which are being made to resist it. Freud even knows of a little girl—this one not yet three years old—who "tried to strangle a suckling in the cradle, because she suspected its continued presence boded her no good."[15] So not the parents alone are in danger. In the case of his own children, "who followed

[13] *Ibid.*, p. 240.
[14] *Ibid.*, p. 217.
[15] *Ibid.*, p. 213.

one another rapidly," he "missed the opportunity to make such observations," the supplanted baby always being too young to be dangerous at the time when its nose was broken—another argument in favor of large families.

He foresees, however, what is to be dreaded later, for he describes the predicament of a man of 31 who had a compulsion-neurosis which took such a pronounced homicidal form that he (the young man) was forced to lock himself in his room and to give the housekeeper the key for fear that he should one day commit a murder. The father in this case was dead and beyond the reach of reprisals, so "the obsessive reproach transferred itself to strangers." [16]

I do not wish for a moment to suggest that this case was unreal or to belittle its horror. I am dealing merely with a peculiarity of the diagnosis. You will observe that the blame is laid to a "reproach." Had the patient never reproached himself he would have remained normal. Now if he was guilty of nothing but some childish fit of temper, and, because of some senseless system of early training, led to magnify it beyond all reason, the diagnosis may be sound. The danger comes from the attempt to elaborate from these instances of abnormality a general system of philosophy applicable to life in general. The implication that reproaches should give way and any sort of conduct spared even criticism, is inescapable. For example, Freud says [17] that "a compulsion-neurosis . . . corresponds to a super-morality, imposed upon the primary character." He chooses morality by name as the target of *his* "reproach."

In the case under consideration, the patient remem-

[16] *Op. cit.*, p. 221.
[17] *Ibid.*, p. 212.

bered, under psycho-analytic treatment, that at the age of seven he had "expressed enmity" towards his father, and (still under treatment) at once "realized that the hatred lay much deeper still." Remorse, awakened by the father's painful last illness, had brought about that fatal "super-morality," without which the son might have remained unrepentant, normal and happy. "Anyone," Freud ominously adds, "capable of wishing to push his own father from a mountain-top into an abyss is certainly not to be trusted to spare the lives of those not so closely bound to him. He does well to lock himself into his room." [18]

Here the psychiatrist distinctly gives to the childish wish that very importance which would naturally lead to excessive repressive measures and to abnormal interior reproach. Moreover, it follows that all of us who are not "sharply distinguished from ordinary human beings" would do well to lock ourselves up. For we are not only capable of entertaining such a wish, we have—so Freud has been telling us through fifty or sixty pages—already entertained it, time and time again. Which brings us to our—

Sixth and Last Assumption: That the cure for hysterical symptoms (and these include most of the ills to which flesh is heir) is the recapture by consciousness of the lost knowledge of that circumstance which drove the original wish-thought into the limbo of the lower psychic locality.

The procedure is for the patient to dream a dream, or if he cannot do this to make up a dream, which the psychiatrist "analyzes." Then the patient lies down on a couch, "relaxes," and repeats whatever random thoughts come into his head as the various parts of the dream are brought to his attention. These "associated" thoughts

[18] *Ibid.*, p. 221.

are analyzed in their turn. If there is reluctance, the operator knows he has encountered modesty ("resistance," he calls it) and has got the range. He can now tell where to train his guns. For all these neuroses, psychoses and psycho-neuroses (mental troubles in general and their physical results) are, according to the hypothesis, the children of shame. Kill shame, and the brats perish. That is what it amounts to.

It may have seemed unaccountable that it should have been thought necessary to invent an elaborate system of dream interpretation when the psychiatrist is convinced from the moment his office door-bell rings that he is about to be confronted with a case of suppressed incest. But the hocus-pocus serves its turn. Never has the ingenuity of man devised a more effective excuse for the discussion of the abominations of the human heart.

"But," cries Freud, "my analyses bring about cures!"

Granted. But that only proves that Freud the man is better than Freud the scientist and philosopher.

The world is full of miserable wretches whose early education was of the most atrocious kind; who were first permitted improper contacts, and then taught that their infantile imaginings were unpardonable sins. The doctor poo-poos the whole matter, and they are relieved. In other words, if he is a wise doctor, he tries to remedy the defects of education by re-education. So long as he has to deal with those suffering from abuse, or from starvation of natural desires—desires which have failed of their ordinary satisfaction without having been sublimated by devotion to higher aims—so long as he deals with these unwilling anchorites and pitiable social victims, he does well.

But what if he writes books, circulating in huge edi-

tions among the normal and spreading the doctrine that mental disease comes from restraint, and not from the rank growth of passions, undisciplined or merely balked?

As to this, I will quote the opinion of Judge William McAdoo, Chief Magistrate of the City of New York. The Judge sees some half-million criminal cases pass through the courts every year, so can hardly be accused of speaking without opportunities for gathering information. And he says in a recent article [19] that psycho-analysis is one of the most "active" evils "effecting modern youth." Parents, he tells us, have been led to believe that any attempt to "suppress" the desires of their children is likely to lead to dangerous "complexes." Hence "the complete collapse of parental authority," of what Freud himself has called "the antiquated *potestas patris*."

But Freud is but one of the figures in a movement, and by following his dreaming for a few more pages we shall be able to learn yet other strange things which are not so, and some—yet stranger—which are.

5. FREUD THE METAPHYSICIAN

Superficially considered, Freud is the very antithesis of Dr. Watson. The behaviorist, indeed, will have none of him. In his "Myth of the Unconscious" he accuses him of having "resorted to voodooism instead of falling back upon his early scientific training." [1] He even suggests that the psychiatrist was "much influenced in his youth by the fable of the devils who took flight into the Gadarene swine." Nevertheless, Watsonianism and Freudianism are parts of the same gigantic piece of mystification.

[19] *The Ladies' Home Journal*, October, 1927.
[1] *Harper's Magazine*, September, 1927.

Freud may speak of the "unconscious" and Dr. Watson of the "unverbalized"; the one of "unconditioned reflexes," the other of "a primary psychic apparatus"; but both agree in effect that the will is a mere phenomenon resulting from the preponderance of forces, that the self is a collection of movements after the things which move have been taken away. In other words, both are mechanists. Their difference is in temperament.

Nor is even this difference very profound. The two philosophies have but one effect—to sanction *laissez-faire* in matters of sex. A verbalized but otherwise unconditioned "gut-reaction" is but a conscious "libido" freed from the suppression which might create a "complex." Dr. Watson's superiority lies in his insistence upon education where sex is not involved. Freud's superiority is literary.

But there are two Freuds, the literary and the metaphysical. In telling dreams no mortal ever dared to tell before, he uses language that he who runs may read. In his book on "Wit in its Relation to the Unconscious"—one of the most complete compendiums of smutty stories in the world—he proves himself a lively raconteur. But when he seeks to plunge deep down to the roots of things, his style suddenly becomes a Chinese puzzle. Take, for instance, the following paragraph from pages 478 and 479 of "The Interpretation of Dreams": "When I termed one of the psychic processes in the psychic apparatus the primary process, I did so not only in consideration of the order of precedence and capability, but also as admitting the temporal relations to a share in the nomenclature. As far as our knowledge goes there is no psychic apparatus possessing only the primary process, and in so far it is a theoretic fiction; but so much is based on fact, that the

primary processes are present in the apparatus from the beginning, while the secondary processes develop gradually in the course of life."

In the original German this seems, to me at least, even less like language than it does in the Brill translation. So much less that one evening as I was puzzling over it, trying in vain to make it fit into any conceivable sense, I fell asleep. And as I slept I dreamed; and as I dreamed Freud appeared to me, and, after considerable persuasion, proceeded to re-translate:

"When I said that one of the psychic processes was the primary process, I meant that it was not only first in capacity but first in the time of its appearance."

"Very good," said I. "Kindly go on."

"As far as we know," he did go on, "there is no psychic apparatus in existence, and there never was one, which possesses only the primary process. Therefore it is a theoretic fiction to suppose that there can be a primary process standing alone."

"Why then," I interrupted, "do you complicate matters with a theoretic fiction when they are complicated enough, in all conscience, if we bother only with facts?"

"Because,"—and his tone showed some asperity, as if he were addressing a stupid pupil, "because the primary processes are present in the apparatus from the beginning, while the secondary processes develop gradually in the course of life."

I gasped. "According to that there *is* a time when the primary apparatus *does* stand alone, viz, the time before the secondary process develops. I thought you just said there was no such time?"

"You needn't be rude," said the great man. "Nobody is supposed to read these obscure passages. But I have to

write them, just as a doctor has to talk a little Latin when you go to him for a prescription. You wouldn't respect him if he didn't. Besides, what difference does it make whether the primary apparatus ever stands alone or not?"

In my dream I pondered this for a long time before replying:

"Perhaps it doesn't make any difference, in a theoretic fiction. But if you mean that the primary apparatus is real, the idea that it can come first and stand alone seems to imply that it really comes first and really stands alone, not only in the individual but in the universe. That would mean that the universe was built from the bottom upwards."

The Freudian dream-image nodded. "Of course—just the way we build a house."

"But," I objected, "if we build a house *we* build it—the house does not build itself. Therefore the house begins with something even higher than its roof. So it is really built from the top down. So is the cosmos, if you will admit that its builder and maker was God. But if I let you build a man from his primary psychic apparatus up, you will be saying next that the universe was built from *its* primary apparatus up—that is, from a theoretic fiction."

Freud lighted a dream-cigar and sat down. "I'm no worse than the theologians," he smiled. "They say the universe was created out of nothing."

"What theologian," I retorted, "ever said that the universe created itself out of nothing? Your own Old Testament suggests that God created the universe out of nothing but Himself."

"And you profess to understand that?"

"Certainly not. The beginning and the end are postulated together in one great mystery. But it isn't a mystery which we invented. We found it here. It is a mystery with force in it—something which goes."

"We are such stuff as dreams are made of," said Freud. "And dreams come from a suppressed libido."

"So? How about a dog's dream?" I suddenly asked. "Does that, too, come from a suppressed libido—a suppressed puppy libido? Or is it due to a super-morality restraining a mother-fixation?"

"How do you know that dogs dream?"

"In the same way I know that you dream. I infer it from the way you act."

"To dream of a dog," he responded heavily, paraphrasing one of his own pages, "is to dream of the major function—French, *chien;* German *Chier.*" He had willfully missed the point.

And so the dream went on and on, until I finally woke up and began idly to turn the pages of the great Dream Book itself. It was difficult to believe that I was not still asleep, for I kept coming upon such passages as the following, from page 442: "To speak figuratively, it is quite possible that a day-thought plays the part of the contractor (*entrepreneur*) in the dream. But . . . no matter what idea the contractor may have in his mind, and how desirous he may be of putting it into operation, he must depend upon a capitalist to defray the necessary expenses; and this capitalist . . . is invariably and indisputably a wish from the unconscious. In other cases the capitalist himself is the contractor for the dream; this, indeed, seems to be the more usual case. An unconscious wish is produced by the day's work, which in turn creates the dream. The dream processes, moreover, run parallel

with all the other possibilities of the economic relationship used here as an illustration. Thus the *entrepreneur* may contribute some capital himself, or several *entrepreneurs* may jointly supply the capital required by the *entrepreneur.*"

This is certainly a moving picture. We seem to be looking upon a lively scene in the financial district, with contractors and capitalists running hither and thither, forming combinations for the prosecution of great works. Yet it is a scene which belongs properly to "Alice in Wonderland," not in a book purporting to be scientific. It is a conjurer's trick, worked by that initial phrase, "To speak figuratively."

Now anybody who admits the existence of God, of a life which is vital rather than mechanical, has the right to speak figuratively. With him figures are the signs and symbols of real things. They have force because they are the personifications of real forces whose existence he is prepared to admit outside of metaphor.

But with the materialist, figures of speech are dishonest subterfuges. They make the impossible seem possible and reasonable. By being admittedly figures of speech, they escape criticism when they come upon the stage. And once there, they act parts possible only to entities possessing energy and will—the very things which the mechanistic hypothesis professes to exclude from the picture. And in the end it is claimed that all things which may be done by these flesh and blood actors may be done by the nothings which they stand for.

This psychic contractor of Freud's has something "in his mind" which he is "desirous" of putting into operation! On the stage he is as full of reason, consciousness and vim as is Mr. Douglas Fairbanks. But in the Freud-

ian philosophical system, literally considered, he is one of the processes of a primary psychic system standing alone—that is, a process in a state of things admittedly fictitious.

But the Great Man goes on:

"The story of Œdipus is the reaction of the imagination to these two typical dreams [of murdering one's father and marrying one's mother]. And just as the dream when occurring to an adult is experienced with feelings of resistance, so the legend must contain terror and self-chastisement. The appearance which it further assumes is the result of an uncomprehending secondary elaboration which tries to make it serve a theological purpose. The attempt to reconcile divine omnipotence with human responsibility must, of course, fail with this material as with every other." [2]

So it is an "uncomprehending" elaboration which busies itself with trying to reconcile divine omnipotence with human responsibility. One would hardly expect an uncomprehending elaboration to succeed in such a task. As to actual incompatibility of the two ideas, it is such a large question that I prefer to consider it later under another head. Freud goes on: [3]

"The unconscious idea, as such, is altogether incapable of entering into the foreconscious, and . . . it can exert an influence there only by uniting with a harmless idea already belonging to the foreconscious, to which it transfers its intensity and under which it allows itself to be concealed."

"Allows itself to be concealed!" It has intelligence and purpose, this unconscious thought. A cunning fellow for

[2] *Op. cit.*, p. 224.
[3] *Ibid.*, p. 443.

a mere reflex in a process antedating memory and reason. But the theatre has suddenly become dark with purple shadows through which absurdity stalks, obscure but naked and unashamed. The unconscious wish is incapable of entering into the foreconscious, but, without entering it, nevertheless manages to exert an influence there, by means of what go-between Freud only knows; for the "harmless idea" with which union is to be made is already beyond reach in the foreconscious. Nor is this all.

"The relations existing for the repressed idea are similar to the situation existing in Austria for the American dentist, who is forbidden to practice unless he gets permission from a regular physician to use his name on the public signboard and thus cover the legal requirements. Moreover, just as it is naturally not the busiest physicians who form such alliances with dental practitioners, so in the psychic life only such foreconscious or conscious ideas are chosen to cover a repressed idea as have not themselves attracted much . . . attention." [4]

The *entrepreneur* (French for "undertaker") has now become a dentist, and the entire Austrian code of civil procedure has been introduced into the psychic apparatus. Yet, such is the lure of figurative speech, so easy is it to fancy that whatever can be true of the figure is necessarily true of the abstraction for which it "doubles," that even Freud obviously thinks he is saying something.

He proceeds to speak of "occupation," meaning not occupation but the possession of energy. And in this way we come to the problem of Will, in these words: [5] "It is probable that the principle of pain first regulates the displacements of occupation automatically, but it is quite

[4] *Op. cit.*, p. 444.
[5] *Ibid.*, p. 388–489.

possible that the consciousness of these qualities adds a second and more subtile regulation which may even oppose the first. . . . The automatic control of the primary principle of pain and the restriction of mental capacity connected with it are broken by the sensible regulations which in their turn are again automatisms." And again: "The mental processes are in themselves devoid of quality except for the excitement of pleasure and pain accompanying them," which, as we know, are to be held in check as possible "disturbers of thought." [6]

This, if it means anything, means that energy in the primary psychic system is automatically regulated by pleasure and pain. But the primary processes are not only unconscious, they are incapable of becoming conscious. "There are," we are told,[7] "two kinds of unconscious . . . both are unconscious in the psychological sense; but in our sense the first, which we call the unconscious, is likewise incapable of consciousness." Freud, like Dr. Watson, attempts to conceive of pleasure, pain and unconsciousness altogether. He, like the great behaviorist, subtracts the quality of painfulness from pain and the quality of pleasurableness from pleasure, and fancies that he has something left—something capable of regulating our unconscious conduct automatically.

Even when we come to the secondary process, with its "sensible regulation," these "in their turn are again automatisms." And though they have no quality except as exciters of pleasure and pain, this excitement must be held in check as a possible disturber of thought—of the sensible regulations. So these higher mental processes, which have no quality save the one of which they are de-

[6] *Ibid.*, p. 490.
[7] *Ibid.*, p. 488.

prived, yet exercise a control at once "sensible" and "automatic" over their more humble neighbors in the psychic basement. And somewhere there is "a restriction of mental capacity." With this last statement I have no quarrel.

"What part," Freud wants to know,[8] "now remains in our description of the once all-powerful and all overshadowing consciousness?" Very little, one would think. "None," he says, "other than that of a sensory organ for the perception of psychic qualities. . . . The psychic process which is turned to the outer world is itself the outer world for the sensory organ of consciousness."

So the lower sensory organ, turned towards the world, is unconscious. And the higher sensory organ, turned towards the lower, is an automatism. No doubt it is true that "the most complex mental operations are possible without the cooperation of consciousness," and that "the state of becoming conscious depends upon the exercise of a certain psychic function, viz, attention." [9] But not even attention can be moved about by nothing. And one complex mental operation which cannot operate without consciousness is rational control. To suppose that the boss of a job does not know what he is doing is to suppose that the job is without a rational boss.

For yet another time the attempt to create a psychology without a veritable Psyche falls to the ground. Freud's fictional apparatus lands him squarely upon the spot marked by Dr. McDougall's X. Once more his verbalization has brought him into complete agreement with the unappreciative Dr. Watson. But what has all this to do with science? Let us find out.

[8] *Op. cit.*, p. 489.
[9] *Ibid.*, pp. 469–470.

CHAPTER V

THE FAIRY HALLS OF SCIENCE

I. THE IDOLS OF THE TRIBE

WHENEVER I stand beside one of those wonders of modern achievement, a great turbine engine, for example, smoothly and silently performing the work of a myriad men, I feel like taking off my hat to the geniuses (for the most part unnamed and unknown) who have made such a thing possible. There may be two opinions about the social effect of machinery, but there can be no two opinions about the prodigies of intelligence which have gone into its making.

Everybody knows that machinery is scientific. And because of the vast esteem which our master mechanics rightly enjoy, the word Science has come to command a reverence once accorded only to the name of God. It is no longer possible to advertise a toy or a tooth-brush without calling it "scientific."

But what is Science? Is it a synonym for Truth? By no means. It is not even a search for truth. Truth is something general; the highest truth is universal. The search for it is called Philosophy. Science, as we now understand it, did not begin to have an independent existence until it definitely abandoned Truth as its province and devoted itself to the study of those—not general but particular phenomena known as facts. When we say that Science is

classified knowledge we mean that it is our classified knowledge of facts. And in that word "classified" lies the root of its only difference from common sense.

Science is also a method for ascertaining new facts as well as the classification of those we already know. What do we mean when we say that science is a method? What is its method? Every schoolboy can answer, "The method of science is the experimental method."

The experimental method itself is less generally understood. To experiment without an object in view is like starting on a journey with no destination in mind. In the vernacular phrase, it does not get you anywhere. The object of an experimenter is always to prove or to disprove something. And what is there for him to prove? A fact, once established, is already proven. But behind one fact there always lies another, and behind that yet others. We soon leave the world of certainty and find ourselves in the world of theories. It is a theory, then, which the experimentalist seeks to prove—his own theory, while disproving that of somebody else. Theories, dignified by the name hypotheses, are as necessary to science as are microscopes and scales. They are invented generalities used as conveniences in a region where Truths are too much to expect. A hypothesis does not even pretend to be true. It is merely the best approximation, the best guess, possible under the circumstances.

Every scientist worthy of the name has at one time or another said something like the following: "The only thing we positively know about a hypothesis is that it is to a certain extent wrong. Progress is made by gradually substituting the less erroneous for the more erroneous, until the hypothesis is finally established in a modified form as a fact, or becomes so untenable that it must be aban-

doned altogether. In either case, it has served its turn." Thus Darwin, true scientist that he was, characterized his theories as to the descent of man as "highly speculative," adding, "Some will no doubt prove erroneous." [1]

The ideal scientist, therefore, never becomes dogmatic, never cocksure. He knows that though Truth be not relative, Knowledge is. He forever deals with conclusions which are highly tentative, and constantly waits for that appeal to experience which will reveal his mistakes. Unfortunately, scientists are but men, and the ideal scientist no more exists than does the ideal Christian. Only those whose specialties keep them constantly close to experience remain truly scientific for any length of time—which is one of the reasons why most of our progress has been made in physics and chemistry.

Francis Bacon, who is generally credited with having first put science upon the firm ground of inductive reasoning, or generalizing from observed particulars, says in his *"Novum Organum:* [2] "Having first determined the question according to his will, man then resorts to experience; and bending her into conformity . . . leads her about like a captive in a procession."

How well Bacon understood our human nature's proneness to determine questions according to its will, and then to bend experience to fit the occasion! But he did not call this method the scientific method. On the contrary, he described it as one of those "Idols of the Tribe," or habits leading to error, to which everybody is subject. And he only *hoped* that science would avoid it as much as possible.

True science has avoided it—as much as possible. But how little true science we have! The experimental method

[1] "The Descent of Man," p. 780.
[2] "The *Novum Organum,*" i. 63.

is so limited in its application that there are few matters important to human life which can be put to the test of immediate experience. We must wait long years for experience in general to tell its tale, and even then its conclusions are not always convincing. To be convincing, experience must take place under conditions of our own contriving, every unknown influence eliminated. And the experience must be repeated time and again. The field of true science is, therefore, one of the narrowest in the world. Much that goes by the name of science is but semi-science, pseudo-science, false science, or no science at all.

The ideal scientist, having suffered an initial experience, then forms a tentative hypothesis merely to direct his subsequent experiments, and never for an instant permits his enthusiasm for theory to warp his judgment regarding fact. But as there are no ideal scientists, what is to be done? Bacon thus notes what is to be expected:

"The human understanding, when any proposition has been once laid down . . . forces everything else to add fresh support and confirmation: and although most cogent and abundant instances may exist to the contrary, yet [the understanding] either does not observe, or despises them, or it gets rid of and rejects them by some distinction, with violent and injurious prejudice, rather than sacrifice the authority of its first conclusions." [3]

How highly fateful, then, must have been those first propositions which modern science laid down in its infancy. But man is not to be balked by his own infirmities. Since he cannot hope to abolish the worship of this particular Idol of the Tribe, cannot hope to be led by non-existent ideal scientists, he will make a virtue of his necessity and reap what good he may from his very short-

[3] *Op. cit.*, i. 45.

comings. Men will not abandon their fetishes and become reasonable. Very well, then, we will incorporate the Idol of the Tribe in our general method, and let abuses correct themselves. We will give them rope until they are hanged thereby.

This is precisely what has been done. Bacon's Idol of the Tribe, the human tendency to bend experience to suit theory, has been put upon a pedestal and crowned with the high-sounding name of a principle called "The Economy of Hypotheses."

Of two possible explanations of a phenomenon, that one is chosen which requires the fewer suppositions, the least departure from hypotheses already existing.

This is nothing more nor less than the principle of conservatism, and probably, in the long run, it does more good than harm. It is a protection against wild and radical theories. It gives men a chance for that long and intense application which they will give to nothing but to the defense of old and cherished beliefs. But it makes the correction of a fundamental error a very slow business, and though a part of the now recognized methods of science, it is not scientific.

It is, however, immensely popular, this principle of the economy of hypotheses. The other ideal—that of submitting continually to the stern discipline of trial—never appealed to the man in the street. For ages he was prejudiced against science altogether. He left it to monks and such people. Then, finally—and not so very long ago—the idea, having proved a money-maker, was "sold" to him. He swallowed it hook, line and sinker, until today he will not admit that he has a pain in the stomach unless he finds in his basic theories something which will let him account for it. What we need now is to be reminded to be

economical not with our hypotheses but with our credulity, our acceptance of hypotheses as final. For there are still many things in heaven and earth not dreamed of in our major syntheses.

A major synthesis, of course, is that broadest, most shadowy, least dependable, but widely inclusive hypothesis by which it is sought to bind all minor theories into one more or less coherent system. It is the point where science most nearly approaches to philosophy, the point where, according to its own premises regarding the authority of experience, it should be most cautious and humble. The making of a major synthesis is an awesome business. The fall of a major synthesis marks the end of an epoch. We are now living at the end of such an epoch, though the pseudo-scientists do not appear to be yet aware of the fact. And the major synthesis which has fallen is that which sought to bind all phenomena together as manifestations of matter—the Mechanist Hypothesis.

That the Mechanist Hypothesis should be the first generalization of modern science was inevitable. It began with astronomy, the first science to dare to call itself "exact." In astronomy we cannot experiment. We cannot take planets and comets and suns, and subject them to laboratory conditions. But we can at least make observations; and what we observe appears to be matter, pure and simple.

Then came physics and chemistry, throwing off the attempt to be magic and buckling down to practical jobs. Both experiment and observation were possible here—and still matter held the field. Matter, it was soon noted, had exceedingly regular habits. And when it failed to follow one habit, continued observation would discover that it was only following some other. These habits came to be

called laws, and it was practically impossible not to confound laws with force.

In the back of the scientific mind were those human laws—customs, behind which was Government, always ready to manifest itself as the force in a policeman's club. And back of that was the idea of the laws of God—of a real God with all the force of the universe in His hand.

"Our laws are the laws of God," said the early scientist, quite rightly. And then, after he had abandoned that ancient idea, the "hypothesis of a God," he continued to say it, not realizing how ridiculous and empty his notion of "law" had become. Eventually he did begin to see this, and was minded to drop force altogether. A law became merely the way things acted under given circumstances, and force merely a persistence in such action—in other words, the way in which other things would act which stood in the way.

A given amount of some substance put into a scale pan will lift the same amount of the same substance to a level with it, and this behavior of the substance in the second pan is the measure of the "force" of gravity moving the substance in the first pan. As to the nature of force itself, the scientist came to say that it lay outside of his province —which was well and good. Pseudo-sciences went further, and said that there was no such thing as force—quite another pair of shoes. But long before this, which marks the end and not the beginning of the last scientific epoch, the Mechanist Hypothesis had been formulated in terms recognizing both force and matter, and brought to the attention of the average man through the writings of Newton.

Sir Isaac Newton had one of the greatest minds granted to a human being since the Reformation; yet inadvertently

he did his fellows about the most evil turn which modern history records. He robbed them of their belief in free will—or if not quite that, he at least induced them to abandon those fundamental propositions upon which alone the belief in free will can reasonably be based.

Free will presupposes force—real force—at the disposition of the will. A will without force is a powerless will—no will at all. And a man without will is not a man; he is not even an animal. He is on a level with his own lawn-mower. Upon free will depends not only all religion, all ethics, all sense of human responsibility, but our physical and mental well-being, our happiness, our very self-respect. If we are but weathercocks, blown this way and that by every breeze, it is folly to talk of striving; of reasoning; of good or of evil; of loyalty or of treason; of anything which makes us act indeed like human beings. It is folly to speak even of consciousness. What good could it do us? We might as well surrender to Dr. Watson at once—and it is folly for him to write books to tell us so, though a folly which he cannot help. To rob man of his will would be to rob him of his life, and to rob him of his belief in the freedom of his will is to rob him of all faith in any means proposed to make life better. Yet our mechanists one and all pretend to be philanthropists, and nearly all are reformers. Every day of their lives is a self-contradiction.

Sir Isaac Newton, when he saw the apple fall and deduced the law of gravitation, did not intend to precipitate another Fall of Man. He seems to have been quite unmindful of the evil reputation of the fruit in question. Nor would much harm have been done had not his discovery been one of those rare scientific ventures which are "good theatre." Everybody has seen apples fall. Nobody can

ignore gravity. The law was the best newspaper story of a scientific sort since Copernicus and Galileo dislodged the earth from the center of the universal stage. It gave Newton such prestige that his slightest word became Gospel.

Much of this prestige was deserved. His laws were, and still are, mighty monuments of human genius. The trouble came from the implications that were drawn from them. The mechanistic hypothesis had long been in existence—no fruit of science, but both root and branch of an old mechanistic philosophy. Descartes had brought it up to date. So Newton adopted it in preference to any other philosophy. And his worship of that Idol of the Tribe, the economy of hypotheses, led him to arrange his laws so as to cause as little disturbance to Cartesianism as possible.

The result was a world in which the Conservation of Energy was the only real God. Neither energy nor matter could be created or destroyed. Whatever went into anything, that or its equivalent came out. A "free" creature gives out more energy than it receives. Therefore to believe in freedom was to be crazy.

Moreover, the "laws" did account very well for most of the known physical phenomena of the day. There were then no Becquerel rays, X-rays, actinium, radium, protons, electrons, quanta or ultramicroscopy to be dealt with. Accurate observation was in its infancy. Materialism was in the very air. Had not science won its first triumphs by looking at matter and ignoring everything else? Newton lived some two hundred years ago. His "closed system" of a universe in which all creative activity had ceased, though it gave us a life without a future, a life wherein everything had already as good as happened, a life that was really a moving death with its future behind it—this all fitted amazingly well with the static ideas of the age.

It was a Calvin's universe, unlit by the fires even of fanaticism. Prayer was futile. Initiative an illusion. Heaven and hell either non-existent or foredoomed. We were here but to turn the pages of a book printed long before we were born.

Actual mechanics, busy at their work-benches, satisfied with a hypothesis which was accurate enough for their immediate needs, thought very little of these far-reaching implications. But here were weapons forged to a nicety for the hands of the leaders of that vast movement which today we loosely and inaccurately call modern paganism—it being neither pagan nor modern, but an old, old disease marked by the hardening of the arteries of the soul self-deprived of conscious communion with God. Pains were taken to bring Newton's findings home to every intellect. Popular science became intensely interesting, and hot with fervor; for in reality it was not science at all but anti-religious propaganda—and this even when it sugar-coated itself, as it sometimes did, with phrases having what might pass for a pious taste.

But it was more than even the "tough-minded"—that is to say, sclerotic-brained—long could endure. Oliver L. Reiser, of the University of Pittsburg (a writer for *The Monist*) goes so far as to say that "had Newton been able to foresee the inevitable logical consequences of his doctrine in the godless universe of Laplace, he might have been constrained towards a more hospitable regard for the views of Leibniz"—the reference, of course, being to the attempt of Leibniz to reconcile the mechanical Cartesian universe with the idea that creation, after all, has a meaning and a purpose. Newton, indeed, might have done even more than this.

But he died leaving us nothing but a big machine which

continued to dominate men's minds until about the year 1890, when the whole thing suddenly broke down. Says R. A. Millikan, of the Norman Bridge Laboratory of Physics, writing recently for *Scribner's:* "In [the discovery of radio-activity and the electrical constitution of matter] the physical world changed in our thinking over night in its fundamental elements from a fixed, changeless, static, dead thing, to a changing, evolving, dynamic, living organism. Two principles, conservation of mass and conservation of energy, are now gone, clean gone, as distinct and separate verities." In other words, matter and energy are now thought to be capable of changing, the one into the other. In the opinion of G. Urbain,[4] the experiments of Rutherford entitle us to say that there are "two chemical elements, the electron and proton, out of which the universe is made." But—"we physical chemists of today do not tell what matter is. . . . The least metaphysical among us all see in electrons and protons merely centers of convergence of lines of force. That evidently explains nothing fundamental. . . . It makes for us a world formed of minute hairy points, the hairs strikingly abstract."

So matter itself is force and nothing else—or rather it is two forces, electrons (negative electricity) and protons (positive electricity) locked together in a strange conflict whose resistance to interference gives tangibility and "hardness" to the things of the world—all of which sounds rather as if it had been translated from the Rig-Veda. Gone by the board is the idea that matter is the fundamental reality, that nothing can happen in the mind but what has first happened in the brain.

[4] *Vide Le Recueil des travaux des Pays Bas,* No. 44, pp. 281 to 304, for the year 1925.

But has mind itself to obey the old law? Is it but a more subtile manifestation of the preponderance of exterior forces? We shall have to penetrate yet farther into these fairy halls of science before finding an answer to that question.

2. SOME NEBULOUS MATTERS

Of all the facts of the old science, none was more firmly established than what was known as the "Nebular Hypothesis." The name "hypothesis" clung to it always, because "nebular hypothesis" makes an imposing mouthful of syllables. Yet it was everywhere treated as a fact. Indeed, after the "fact" of the conservation of energy, it was just about the fact of facts. What has become of it now?

A. Vibert Douglas, M.B.E., M.Sc., writing in *Discovery* for August, 1925, says, "The nebular hypothesis of Laplace and the planetesimal hypothesis of Chamberlain have gone into the history of science as great and lasting *monuments* to their originators."

Monuments! Memorials marking the last resting place of things now dead.

How carefully Herbert Spencer used to explain the manner in which a lot of star-dust, scattered somehow through the space marked roughly by the orbit of the planet Neptune, started to contract, revolve, grow warm, and to throw off rings (since known as Jupiter, Saturn, Venus, Earth, Mars, *et cetera*) and ended by central concentration in our glowing sun. There was nothing difficult to understand about the theory except the language in which Spencer couched it—that is, unless one tried to look be-

yond and into some of the things which it took for granted. In that case certain questions arose. What scattered the dust in the first place? Would it scatter it again, again, and yet again, thus creating the universe of recurrent phenomena imagined by the horror-loving Nietzsche? What force separated the rings from the mass and rolled them neatly up into planets? Why haven't Saturn's rings rolled up? Will they, in time? What is keeping them back? These matters, and various details which had been observed but by few, troubled the mathematicians.

They hardly caused the average citizen to lose a wink of sleep. Saturn looked like a working model preserved for school-room purposes. And the nebular hypothesis was a pleasant story to tell to children. But the contrary observations increased and multiplied—for the most part without getting into the newspapers—until now we have Vibert, with a host of competent astronomers ready to echo his words, saying, "A nebula giving rise to a solar system [is] an impossible hypothesis in the light of modern knowledge."

The hypothesis itself has not been altogether carried away to the bone-yard. Like an old and faithful horse, it has been taken from the shafts and turned out to grass so that it may enjoy its declining years in comparative peace. The latter pastures of the nebular hypothesis are sufficiently large, for it is being used now to help make stellar systems. As there is little in this far region save assumptions to drag around, the work is light. Fit ending for an honorable career. But astronomers have grown cautious. It is not likely that any of them will be rash enough ever again to impose the weight of a real star, let alone a system, upon the already broken back. They at least know the hypothesis for what it is—a hypothesis, and

a dying one. Only laymen, half asleep over their Sunday supplements, now think it was ever anything else.

And what has come to take its place? The "Big Star Theory." An astronomer named Jeans brought forward this entry in 1919. He said that if a big star had ever come near enough to the sun, it might have caused a fearful tide of solar substance—a long arm of stuff more or less gaseous and very hot—to reach out millions of miles into space. And from this hypothetical arm (there were really two, but let us not complicate matters with details), broken into several pieces, the planets might have originated.

This time there was plenty of force at hand, enough to satisfy all the equations which the mathematicians were likely to contrive. No need to try to think how the dust had been scattered. The force came from the big star, which Jeans made a very big star indeed, with a diameter of eight thousand million kilometers—say about twice the distance of the farthest planet from the sun. Anyway, there was a very big star concerned. Too big. The mathematicians could not use all the force thus put at their disposal. Dr. Harold Jeffers therefore reduced the mammoth to a diameter of a mere forty million kilometers.

The mathematicians still objected. It was no longer a question of force. But the theory of probability, they said, made it almost unreasonable to suppose that a collision or near collision could actually have happened within the lifetime of the sun. So astronomers set to work again, some of them to lengthen the past life of the sun, others to bring the stars in general closer together so as to increase the risks of collision. Both parties succeeded admirably. Jeans himself published a calculation which made the sun a million million years of age—seven thousand times older than any other calculation had ever made it. There were now

seven thousand times more chances of a collision having taken place than there had been when he started.

Others (you may read an account of their observations in an article on the Spiral Nebulæ, by C. Wirtz, in *Scientia,* November, 1925), discovered that when you look long enough and deep enough into the gulf of space (about three hundred thousand light-years is as far as you need to go), it looks as if all matter were outward bound, and moving faster and faster all the time. Therefore the stars used to be much more thickly placed here around home than they are now. A collision becomes easy to imagine.

But why is matter going away from here? Apparently for the same reason that rats leave a sinking ship. Our own galaxy, the Milky Way, ought to be five times more thickly settled with stars. As things stand, it is much too light for its size. It cannot hold itself together and is being deserted by its outer fringe of suns all the time. Nor is this the worst of it. The very matter of our solar system is fifty-two times less dense than it should be. Its critical point—that is, the point where it will fly to pieces at the slightest provocation—has long since been passed. Some day, a few million years hence, when you get up in the morning the morning is likely not to be there. This is not such a good story to tell to the children.

Nor is the situation any better if you turn your back to the stars, and look at those little stars within things which we call atoms. Very much to the contrary. Some meteorologists created considerable consternation a few years ago by prophesying that one of the glacial epochs, probably the last one, was coming back to play a return engagement—decidedly not by request. But what is a glacial epoch or two compared with atoms in the state ours are in?

"We owe to Sir Ernest Rutherford [the great English

physicist] what is basic in our actual ideas about atoms," says Urbain.[1] This savant was once a pupil of Pierre Curie, discoverer of radium, and speaks with authority. And he asks: "As to the atom, have we attained something real, or only a model, symbolic of observed phenomena?" He then answers his own question by declaring that "it is difficult to say. . . . Rutherford allowed the electrons [in the atom] to radiate, since it was supposed that the model must obey the standard laws." The difficulty was that such an atom as Rutherford's ought, all agreed, to be luminous. And all atoms are not luminous. Another difficulty was this. "Each outer electron must gradually approach the central nucleus,"—I still quote from Urbain—"finally falling into it, which means death." Presumably it is not intended to be implied that the same electrons which were allowed to radiate ended by falling into the thing they radiated from. Anyway, Urbain continues: "We might have accepted the death of the stars . . . but we cannot that of the atoms. That would mean a definite death of the universe."

For once, even scientists were appalled. What was to be done? Something, evidently. So an astonomer named Bohr rose to the occasion. He constructed—not another atom, but another "model." This one was guaranteed to last forever, and if real atoms would only conform to it all would be well.

"Bohr's atom," says Urbain, "is not a clear explanation, for the privileged orbits [he gave the electrons "privileged orbits" to keep them contented without either flying off into space or into the deadly nucleus] are not understandable in themselves; neither are the quanta of

[1] *Le Recueil des travaux des Pays Bas,* No. 44, pp. 281 to 304, 1925.

energy set free by the electrons in leaping from one privileged orbit to another. . . . Bohr's models have their own laws with no necessary relation to the law of ordinary experiments, and he thus turned scientific thought into a new and unknown direction. . . . In the future are theories to be built upon such contradictions?"

Apparently they are. We have now observed so many things that it is flatly impossible to grapple with them, or to find out which ones are so and which are not. The "new and unknown direction" into which scientific thought has been turned is clearly that of imagining artificial working-models known to be at variance with reality, getting what satisfaction can be had from the models, and leaving reality to shift for itself until some really serious collision with fact damages the model beyond repair. It is not such a new direction, after all, but merely a new frankness which acknowledges the shortcomings of a hypothesis from the start without a period of pretending that it is a genuine "explanation." Every new discovery makes the universe—not easier, but more difficult to explain. Progress uncovers our ignorance much faster than it brings us knowledge—arm-chair progress, of course excepted.

So Urbain is thankful for the new model atom, and says that "Bohr, in reviving our hopes, is a great benefactor." Adding, "It seems necessary either to resign ourselves to not understanding, as Bohr has done, or to resign ourselves to a model in flagrant violation with experience."

Those sufficiently resigned to not understanding I now ask to return with me for a short and final visit to those suburban stellar districts situated some three hundred thousand light-years from our sun, where matter is moving ever faster and faster away from us. By a strange con-

tradiction, time in those regions seems to be moving slower and slower, as if tired with the long journey and no longer able to keep up the killing pace set by the stars. Light, too, appears to be losing the race. Professor Michelson, of the University of Chicago, established the velocity of light not long ago at 299.796 kilometers per second—roughly 186,000 miles. But now Monsignor E. J. Gheury de Braye, in an article in *L'Astronomie,* official organ of the Astronomical Society of France, declares that the velocity of light decreases by four kilometers every second. We may perhaps grasp a moment's understanding by saying that this is relativity, that light merely travels slower in comparison with the quickened pace of time and matter in the outer stellar spaces.

This, however, will not serve us long, for W. de Sitter, the Dutch astronomer, taking all these things into consideration, must needs offer an "explanation."

"The world of de Sitter," says Wirtz in summing it up, "is a four-dimensional continuum of space and time, forming the surface of a sphere in five-dimensional co-ordinates."

If you look wise and pretend in scientific circles that you understand this, you go to the foot of the class. A four-dimensional sphere with a surface in five-dimensional co-ordinates does not pretend to be comprehensible. To declare it to be graspable by the human mind is to insult it. But it can be used in equations, like any other "imaginary" quantity, though—again like any other imaginary quantity—it is quite unimaginable.

Imaginary quantities are not such awesome nonentities. Anybody can make a few for himself and play with them as well as can anybody else. Let us take nothing to begin with, thus—0. Write a 2 under it—0/2. We have now

one-half of nothing. Now multiply a cipher by 2, and we have twice nothing, or 2(0)—not for a moment to be confounded with twenty. Then one half of 2(0), or twice nothing, equals two times 0/2, or one-half of nothing, because each is equal to nothing at all and things which are equal to the same thing are equal to each other—and for various other reasons.

Abstractions are other imaginary no-things which cannot be imagined. A mathematical point has, by hypothesis, neither length, breadth nor thickness. We always think of it as a very small dot, having all three. Yet in dealing with it, mathematically, we ignore these dimensions in the result. A line has length, but no breadth or thickness. We think of it as something long and very slender. It is the edge of a solid. A plane has length and breadth but no thickness, theoretically speaking. We think of it as a very thin slice of a solid. Try to think of the surface of a solid without thinking of the solid! Abstractions are conveniences when we wish to travel light without carrying all the mystery of material reality about with us. They are like Bohr's model atoms. And like all other unreal things, they have a danger of their own.

The practical man, especially if he be a physicist or a chemist, a worker in those domains where our greatest scientific triumphs have been won, has experience always at his elbow ready to correct his errors whenever they pass beyond a certain point. Invent a machine, or a shaving soap, and you are immediately compelled to prove that your invention will work. And the only proof which those who invest in such things will accept is the sort of proof which we require of a pudding when we eat it.

Experience has shown that not even the best calculations ever quite verify themselves when put to the test of

novel circumstances. A small model may run smoothly, yet a large machine made in the same way will develop unexpected flaws. Even increased size is sufficient to upset the forecast. A machine may run for a week, yet become cantankerous if we try to make it run for a year. Time adds a new element. So does speed. Chemical compounds which cannot be made to explode in minute quantities—coal dust, for example—sometimes work havoc in large quantities.

Now the physical sciences, like chemistry and astronomy, deal with the simplest and most tangible things of which we have any knowledge. Yet those who make them their study confess themselves baffled at every turn. In these dreadful regions, Science, the real Simon Pure, humble, beautiful and courageous, tries to maintain itself under the pitiless bombardment of facts, smoky with the infinite mystery from which they come, that rain every year more violently upon its defenseless head.

What has become of the Sunday-supplement, positive, dogmatic, you-are-a-fool-if-you-do-not-agree-with-what-I-say attitude? These men, who do not wish to be mystics, engage in more ghostly talk than did the delegates to the Meta-Physic Congress which met last year at the Sorbonne in Paris to discuss telepathy, haunted houses, and kindred matters. Gone is the cocksure vanity of the closing nineteenth century. Gone is the God-defying materialistic impiety, the arrogance, the hard-heartedness of an older and more ignorant day. In this ultimate dim Thule where the higher syntheses are born, kissing the dust is today the only permitted posture. Hypotheses hardly dare to call themselves even hypotheses any more. They are content to be known as assumptions, postulations, fancies, guesses, and thankful if they may be al-

lowed to live their unreal existences from the time of the publication of one pamphlet to that of the next. Early modern science was drunk with victory. New science is dizzy with awe.

How comes it, then, that our Dr. Watsons can say that there is no mystery in the building of a man? A man! Ah, that is different. We have as yet hardly touched upon those positively certain "sciences" which deal with human nature, with love, life and destiny.

3. THE BED OF PROCRUSTES

Hans Driesch, at Jena, working in the very laboratory of Ernst Haeckel shortly after the death of that master argument-maker for the mechanist conception of life, inadvertently broke a fertile egg in two—and thereby broke not in two but into smithereens the whole mechanism of the mechanist which he had been taught to defend. For the egg hatched, each half producing a perfect creature as if nothing had happened.

Driesch then reduced a fertile egg fairly to hash—and still each fragment functioned like a whole egg. As long as the egg was not killed—and the eggs of primitive creatures are tough eggs except where temperature and certain poisons are concerned—hashing merely multiplied the hatch.

The biologist was much disturbed. For it seemed fairly obvious that if the design which growth was to follow lay anywhere in the material of the eggs, division of said eggs would—if it did not bring the whole vital process to an end—result at least in the division of the incubated organisms. One half of an egg should, if it hatched at all, hatch a head; the other half a tail—and so on. But this not be-

ing what happened, design could no longer be located in egg material. Any part of the material was ready to develop into either head, or tail, or wing, or antennæ, or what not, according to the direction of something beyond the dividing process—something which remained whole in each part.

Perhaps the experiment was not conclusive. In these days of model atoms no doubt somebody can construct a model egg, each atom of which is, potentially, a complete chicken. But what troubled Driesch was the immediate necessity of violating a primary principle and being compelled to be extravagant in the matter of hypotheses. Even a model egg required a great many changes in Haeckelianism.

Now if Driesch had been of an older generation or of a different persuasion, he would have found the ideas of Haeckel, not the idea of exterior design, extravagant. For one of the most ancient hypotheses in the world assumes that the design for everything lies outside of its material self. And I sometimes wonder if the principle of economy should not have been earlier applied, before so many of us abandoned this grand old major synthesis which found its highest expression in a belief in God. If it did not explain everything, it at least left room for the explanation of everything. All we had to do was to struggle for a truer and clearer conception of what it meant. Astronomers, for instance, would not now be so hard put to it in the matter of inventing Big Star theories, nor physicists in making model atoms which neither work nor exist, if they were at liberty to suppose that a forceful spirit lay behind phenomena, lending a guiding hand to all. Intellectually that would be at least as satisfactory as points of force surrounded by highly abstract hairs.

But the idea of God as it emerged from the nineteenth century presented itself to many minds as the idea of a rather ridiculous monster—the monster that Sinclair Lewis dared to strike dead,—the monster that Stephen Crane once fancied as lying "dead in heaven," and at another time warned not to shake its bloody spears at him if its "sublime ears" did not wish to "hear curses." Neither Crane nor Lewis need have shocked anybody. They had each seen a straw man set up, and were but proceeding to knock it down. The only shocking thing was the idea, the deformity, which had been presented to them. Where it came from it is not my present purpose to enquire.

Astronomers and physicists have now gone far beyond Crane and Lewis and are looping back—saving their faces (i.e., hypotheses) as much as possible—and picking up ever more and more of the ancient belief thrown away in the hour of materialistic extravagance. Chemists, too, are beginning to realize that there is no use going on and pretending that our thoughts, our feelings, our every manifestation, can be reduced to a mechanical basis, since not even a sea-urchin or a pismire can be so reduced.

This something which we call life shows itself, ordinarily at least, only when certain physical elements are present. But it shows sufficient independence of these elements to make it impossible for any rational, unprejudiced being with the facts before him to continue to confound life with matter.

Yet many learned professors do continue to confound them. Why? In some cases it is, perhaps, not too much to say that the holder of a university degree is not necessarily in possession of all the facts. And very few of us, professors or not, are without prejudice. We must remember the Idol of the Tribe, the capacity of the mind to become

so clouded by passion and biased zeal that it sheds unwelcome evidence as readily as a duck's back sheds water.

It was Herbert Spencer who first popularized the notion that materialistic science could explain everything. It had not been invented with an eye to explaining everything—only a few things, with the hope of getting hold of them in a way that might be useful. But so great was the success of the early applications of the method that the temptation to turn it into a synthetic philosophy was too great for mortal to resist. Spencer had the advantage of not knowing very much. His early education had been neglected. And his powers of invention were practically without limit.

It is always easier to explain when not burdened with too much first-hand knowledge. Hearsay, and what we learn from books, is the stuff for theories. But the facts which have entered intimately into our own lives are stubborn. We are too familiar with their edges to fancy that they fit into whatever space may be contrived for them. Ignorance is satisfied with almost any account. Those who deal a good deal with retorts and crucibles may speak of men and women as retorts and crucibles. This is impossible to those whose knowledge of human nature has made them distinguished in affairs. The books of a closet economist satisfy everybody but business men.

If you have spent much of your time in observing, say, the behavior of rats on inclined planes, you may come to think of animals as machines. One such investigator has recently discovered that rats are "negatively geotropic." That is, they are afraid of falling; and when the plane is tipped will scramble away from the lower edge. A pet rat would have taught him not only this, but that, under kind treatment, the rat is one of the cleverest and most affec-

tionate four-footed creatures in existence. A scientist bores holes in a dog's cheek to measure his autocoid secretion; or he removes part of a dog's brain, scratches the animal's leg, notes that a kick results, and comes out of the laboratory convinced that we all walk—not with a desire to get anywhere, but because of the irritating effects of the ground on the soles of the feet. Go tell that story to a man who knows dogs!

Those who love and understand animals cannot be made to believe that animals are devoid of sense and feeling, or act blindly in response to stimuli. Why then should we listen only to those who know nothing of animals and care less? Lovers of flowers will even go so far as to attribute a sort of sentience to vegetation. Are they necessarily wrong because their opinions are contradicted by teachers in flowerless school-rooms?

J. C. Bose, the great Hindu scientist, has lately intrigued the whole world by writing a book in which he shows that trees have eyes, nerves, veins, something which corresponds to a heart; are capable of pain; of fatigue; can be poisoned; and to a certain extent seem to remember what has happened to them. What is the result? Why, our mechanists have hurried to invert the Bose philosophy and to describe it with its heels in the air. It is *"la fin du mythe de la force vitale,"* cries Pierre Guitet-Vauquelin.[1] Bose, according to this ingenious writer, has discovered *"l'unité de la matière vivante et non vivante,"* and the conclusion is drawn that said unity has been arrived at by making the *non vivante* universal.

The Idol of the Tribe, the economy of hypotheses, has become a Procrustean bed, to which everything must be stretched or cut to fit. But unfortunately this particular

[1] In the Paris *Matin*, September 4, 1927.

bed was made by chemists and physicists in Newton's time to fit certain facts and approximations to truth in which they were dealing for the moment. It was then a convenient bit of furniture. Now it is very awkward. We cling to it only for old time's sake.

The modern experimental method as at first developed has proven woefully inadequate when universally applied. Even the study of outward behavior is very difficult, especially if the subject be human, for we cannot duplicate in the laboratory the exact circumstances of real life—and every variation is fatal to accuracy, especially as its influence is often unsuspected and totally unknown. We cannot control our own species, because we are not placed above it—though many of us would like to be.

This entails another difficulty. As we are not above it in power, so we are not above it in intelligence. The mind in attempting to study itself has the disadvantage of being both the eye and the picture. No wonder the so-called social sciences have failed to duplicate the triumphs of physical science. They have tried to steal a prestige which they have not earned, to work with borrowed tools instead of developing proper tools of their own.

But since it is the habit of the age to look below for its sanctions, let us look a little more intently—at the findings of the new science.

4. THE NEW PHYSICS

Unfortunately, the new physics is difficult, or at least can be made to seem difficult. Few lay readers have any first-hand knowledge of it; few lay readers have ever read a book of science in their lives, new or old. In fact science does not publish itself directly in books, but in short mono-

graphs, editions limited to two or three hundred copies. At best these papers make their appearance in small, specialist magazines. And they are couched almost entirely in mathematical symbols interspersed with long words barbarously derived from the Greek and Latin. True scientists have not yet learned to advertise.

We are therefore at the mercy of the popularizer, and the popularizer is under every temptation to bolster up popular prejudices and misconceptions. There is also the "story interest" which he must consider.

These are times when government is not by reason, by principle, by expedience, or by experience. We are governed by story interest—the thrill such as we get from a good detective yarn. Most of us must get the bulk of our information from the newspapers, magazines, and the most accessible and widely distributed of books. These depend upon story interest for their sales. We buy those periodicals and those volumes which promise to thrill us most; it is so much more pleasant to be thrilled than not to be thrilled. Thus it becomes to the interest of editors to see that we are thrilled as much as possible, without regard to ultimate consequences. Fiction tends ever more and more to become the moulder of public opinion.

It is of course a better story if Voronoff's transplantations of goat and monkey glands result in prolonged life than if they do not so result. To say that chemicals will take the place of male sperm in the fertilization of sea-urchins' eggs (as Loeb, a few years ago, used to claim) produces a greater thrill than to say that this consummation so devoutly wished by some has yet to materialize. It is even thrilling to be told that life is mechanical, for that gives man the flattering idea that some day he will be able to create life in his own workshops and set up an in-

dependent business as a god. We do not stop to think of all the implications of such a theory—and we buy the paper. We go further, and enact laws which take the truth of the articles in the paper for granted.

So, when the modern popularizer deigns to give his attention to modern physics, he has a single eye to the "story." The difficult parts, the parts expressing doubt, the parts which do not fit with the pet fads of his readers, he can omit. Or he can take an entire theory and stand it on its head. The effect will be exciting—and marvelous.

There are those who are becoming tired of this childish procedure, those who would really like to know what is going on without having to perfect their Greek and Latin or master the higher mathematics. They would even like to know if it be true, as has been claimed, that the attempt to reconcile the omnipotence of God with human free will and responsibility has always been found scientifically impossible—to know if belief in either will or God be in itself unscientific and contrary to mathematics. Probably they will go on believing in God and free-will anyway—for those who do not have not yet become tired of childish procedures. But it will be with a certain sadness. The man who must hide his faith from his reason in fear of attack, is not a complete or a happy man. Few of us realize how much depends upon our conception of the fundamental truths of physics, how we lean upon what we understand to be the laws underlying the material world.

The Scholastics claimed that the existence of God—even the great truths of Christianity—could be demonstrated by reason alone; but few have sufficient philosophical training or inclination to follow such arguments to

their end. Science, while it has often claimed to be able to disprove religion, has never claimed to be able to establish either religion in general or any one religion in particular. The most that can be asked of it, I think, is the removal of those barriers which, some time since, it erected in the way of belief in the supernatural.

Science has always had its Mendels, its Voltas, its Galvanis, its Ampères, its Pasteurs—men who believed as heartily in God as they believed in his works. But I do not wish to discuss the religion of scientists. It will be enough to show the bearings of recent science upon an antiquated but still pretendedly scientific materialism. So let us chose a single paper by a modern worker—a man comparatively obscure.

He will of necessity be comparatively obscure, for no one can be a scientist pure and simple and be widely known unless he has invented a popular mechanical appliance, advertised a cure for some common disease, wandered into a foreign province as a prophet, or had the luck to say something startling—such as, "Man descended from a monkey," or "Everybody can live to be a hundred years old,"—and even then fame usually takes time to accumulate.

Ralph S. Lillie has as yet written no good story. But he has an interesting article, entitled "Physical Indeterminism and Vital Action," in *Science* for August 12, 1927.

Mr. Lillie, a worker in the Marine Biological Laboratory, is the author of "Protoplasmic Action and Nervous Action," and his very occupation shows that he is engaged in the business of wrestling knowledge rather than thrills from the phenomena of the world. What he says, however, is much more thrilling than the most incestuous

dreams ever dreamed by a Freudian, or all the discoveries ever made by dropping babies upon pillows in the laboratories of Dr. Watson.

For he says that we are free; that there has been observed under the microscope certain actions which look much like the veritable finger of God, glimpsed for an instant through the screen of matter behind which His power forever works—a power that we so often fail to recognize because, from our infinitesimal observation of it, it acts according to laws—laws we have for the most part made ourselves and to which we almost invariably give a personality and an omnipotence we would feign deny to the Deity whose doings they so imperfectly record.

But how does Lillie say all this? In the most lamentable manner—in Scientese. You will not wonder why I called him obscure after you read the following sample paragraph:

"Science and philosophy, but especially science, have found great difficulty in reconciling the apparent indeterminism of many vital manifestations, particularly voluntary action, with the strict determinism of physical science. The traditional problem of freedom, with all its implications, is the classical expression of the difficulty."

True, this is by no means as cloudy as Freud when Freud plays schoolmaster and propounds incomprehensible metaphysics intended to inspire our awe. It contains no confusion of thought. But it is sufficiently cold and forbidding. Lillie totally lacks the literary ability of Freud, the raconteur of spicy stories. It is evident, however, that he means to point out the difficulty which science has found in reconciling the doctrine of blind reaction with that appearance of choice which is often to be noted in the conduct of the higher forms of matter. Living matter,

apparently, does not respond to external stimuli as mechanists think it ought to. It is inclined to behave as if it had some force, some will of its own. In other words, it seems to a certain extent to be interiorly determined.

There would, of course, never have been any controversy as to this had those who took the negative been honest enough to accept a rational definition of will and of freedom. Nobody ever claimed that the will is free in all respects. Nobody supposes that a man set upon by a mob can go his way as if nothing had interfered with him. He may be dragged to the stake or the scaffold. Physically, there are circumstances in which his movements are most certainly exteriorly determined. The most that he can do is to refuse his consent to those motions he is forced to perform, so that the resulting conduct is none of his.

But psychologists have assured us that the giving or withholding of this consent is automatic; that physical forces are still at work; that a man has a mob inside of his head even when there is no mob without; and that what he does seemingly of his own volition is but the net result of the pullings and haulings of this interior horde of instincts, desires and stimulators. Moreover, these forces themselves came either from parents or environment and the man himself is but their sum—he is his own inner-mob. Nor can it be denied that the law of the Conservation of Energy gave psychologists the right of the argument. Since Newton, only the very wisest of men have had any intellectual excuse for believing themselves either real or free.

"Analysis, in tracing down the sources of [physical action]," says Lillie, "seems always to restate determinism; it shows the will to be motivated; motives have their natural origins; actions not consciously motivated are

either habitual and referable to past motivation, or are instinctive and determined by heredity. In either case we seem to have a mechanistic determination."

Having thus fairly stated the enemy's argument, he goes further and admits that "although voluntary action affects mechanical change and seems free, the 'energy balance sheet' of a man shows no conflict with the law of conservation, indicating that there is no creation of energy within the organism. . . . Classical physics thus seems definitely incompatible with the idea of freedom. Accordingly, scientific men—and somewhat curiously biologists in larger proportion than physicists—have commonly regarded freedom as a delusion. In so doing they have created more difficulties than they have resolved; certainly the inner conviction of freedom has not been abolished in the minds of most thinking men."

There are one or two points to be noted here. "Somewhat curiously, biologists in larger proportion than physicists" have been willing to abandon the free-will hypothesis. He doubtless means comparatively recent biologists, men who have taken their foundation physics from the books regarded as authoritative in their school days. Or perhaps there is another reason. Following the Idol of the Tribe, they look below them for their models, and seem to feel obliged to make their subjects as much like the machinist's subjects as possible. And when they deal with man they are shut off from the corrective influences of free experiment. Mistakes in speculative biology are not at once apparent. They are not immediately applied, and returns are slow in coming in. But I am willing that the enemy should take what comfort he can from the biologists. He may say, if he likes, that biologists are the ones who call life mechanical because biologists are the ones

who work closest to life. Lillie happens to be a biologist himself—a biologist of details, not of generalities.

As to the "energy balance sheet" of the individual, I think he leans over backward in his endeavor to be fair. Considering the exceedingly minute quantities of energy involved, it cannot rightly be claimed that the energy balance sheet even of a wayside daisy has ever been experimentally worked out with an accuracy fit to be called conclusive. Only recently have we even begun to measure quantities of this order of magnitude. Only recently did we know how very little energy we needed at our disposal in order to rid our inner conduct of external compulsion—and it is inner conduct alone with which we are here concerned. We do not ask to be able to shake a physical leg at will, but merely to be capable of shifting our attention to legs if and when we chose, or to entertain the desire to shake.

But once more let us grant the point to the adversary. Let him prove the balance sheet of the individual if he can—it will avail him nothing. Lillie, in seeming to leave intact the Law of Conservation, is but planning a flank attack. For a curious reason soon to appear, the law may rule and yet leave us free. It will then cease to be of moral importance. Our biologist goes on: "We must regard it not as a coincidence but as highly significant that the only region where physical science gives evidence of . . . externally uncontrolled, or individual, action, is in the field of ultra-microscopic phenomena."

Nevertheless, there is a coincidence here. The field where Lillie has noted externally uncontrolled individual action is his own field. As a worker in a marine biological laboratory, the minutest forms of life are objects of his daily study.

If I wanted to settle the question by authority and a show of erudition, I could now quote from Jordan's "The Philosophical Foundations of the Quantum Theory." [1] While if it depends merely upon famous names I could cite Einstein and Smoluchowski, who have found that the second law of thermo-dynamics (according to which heat is said to pass from higher to lower temperatures in direct proportion to the energy which is extracted from it —another way of expressing our old friend, Conservation) does not hold true when the time and space involved are sufficiently small. And to this Svedberg, in his "Colloid Chemistry," agrees by saying that in microscopic systems it is obvious that "fluctuations of entropy" (variations in the amount of a given energy which is found to be "available") undoubtedly occur.

But there is no need to follow such a thorny path as this. Lillie sufficiently sums up the situation by declaring that "the universality of the rule of physical determination" as regards very minute, or "quantum" phenomena, is now subject to question; and that "in the highest manifestations of life, prediction [that is, the discovery of a mechanical law governing conduct] is not possible at all." And he adds: "It follows that the regularity of macroscopic [or large] phenomena, in which determinism is for all practical purposes complete and trustworthy, is in reality a *statistical regularity.*"

What can he possibly mean?

Here is in reality a flash of light in darkness, the gist of the whole matter, the way out, the explanation of a thousand riddles. And he must put it in such language as this!

[1] *Nature,* vol. 119, 1927, p. 566.

For a statistical regularity is of course nothing but the regularity to be observed in averages. Individuals vary in a way which groups do not. No one is compelled to commit suicide this year. If I do such a thing it will be because I am individually a fool. And nobody knows whether my good sense is going to last another twelve-month or not. Yet every actuary in every life-insurance company's office in the world knows how many people are going to commit suicide this year, and next year, and the year after; and the quota which each civilized country is going to furnish. Their knowledge may not be absolutely accurate as to the last digit. There is a very slight margin for mistake. But they are almost as certain of the figures as they are of the figures for last year, or the year before. Mass action is sufficiently regular to make calculations based upon a comparison of its future with its past exceedingly profitable. Groups, and groups alone, obey the Law of Conservation. It was group action observed among atoms which gave rise to the formulation of that law. Individuals behave capriciously, obeying the laws of their unique natures, laws known only to God.

But it will be objected: is not man a mass of atoms, or a mass of whatever ultimate particles science finally arrives at? And the answer is an emphatic *no*. His body is such a mass, but it is so formed as to be controlled, in so far as its movements are voluntary, by an individual self whose inner essence is single. The only way to make group action out of one man's conduct is to observe him over a long period of time. His average may be guessed at. But nobody can say how he will act in a new and unusual circumstance.

5. CHANCE

Pious people have always been prone to declare that there is no such thing as chance. They have been afraid that belief in chance implied a disbelief in the omnipotence of God. Never were pious people more mistaken—or perhaps I should say misinformed. The doctrine of probabilities is one of those things belonging to mathematics which the pundits have decided it were better for us common people not to understand. So they have carefully refrained from stating it in interesting, or even human, language, pretending that we were barred from comprehension by the inadequacy of our intelligence and education.

Nevertheless we all inhabit a world upon the phenomena of which the doctrine of probabilities is founded. We are compelled to live every day surrounded by events "obeying" the Law of the Greatest Probability. And those of us who have made any success in life have become pretty good mathematicians, though we may know no mathematical symbols beyond the signs of addition, subtraction and division.

It is of course misleading to say that events *obey* the law of the greatest probability. Events do not obey any of the laws which science has formulated. On the contrary, the laws were, in so far as they are laws and not mere errors, formulated in obedience to the events. But to say that there is no such thing as chance is to say that there is no such thing as ignorance, which to my mind is hardly a pious idea. For chance, rightly understood, is but the measure of our ignorance. Nothing more.

Given total ignorance, the chance of guessing right is too remote to be calculable and can be expressed only by

the meaningless formula, "nothing to infinity." Given total knowledge, certainty leaves no room for probability. In all other circumstances, chance is the balance in which we weigh what we know against what we do not know. Gambling is called a vice because nobody ever uses the word except to describe some form of chance-taking which he considers vicious—the vice usually consisting in a foolish attempt to get something for nothing. It is considered particularly immoral to lose. But in a broad sense, everyone gambles who lives. I hope I will be pardoned, then, if I take my illustrations from actual games.

If we know that a penny is a disk of equally weighted sides and is to be tossed in the air by an unknown amount of force which will cause it to turn over an unknown number of times, the chance of its falling head up is the same as that of its falling head down. We say the odds are even. If we do not know what a penny is, we cannot reckon the odds. If we know exactly what a penny is, know its present position in relation to the table-top, and know that it is going to turn over three times, say, there are no odds to calculate. Ignorance has been supplanted by knowledge.

But why do we say that an even-sided disk, thrown at hap-hazard, is as likely to fall head up as it is to fall tail up? Because observation in the past has taught us that such is the case. We may reason subsequently about momentum, gravity, and the like, but observation lies at the bottom of our knowledge. Very well. The sun rose this morning. I know that. What is the chance of its rising tomorrow morning?

If I know nothing but what I have stated, the chance, from my point of view, is as one to one. The odds are even, nothing more. It is just as likely not to rise as it

is to rise. From the standpoint of an Omnipotent God, this is not the case. He knows whether it is going to rise or not. To God there is indeed no chance.

But to mankind at large? Surely the chances of the sun rising tomorrow are better than even? To be sure they are. For mankind at large knows not only that the sun rose yesterday morning, but the morning before that, and on ever so many other mornings. How many? Upon the answer to this question rests the actual chance of its rising again, for the answer shows the amount of our knowledge. The more knowledge, the more certain the chance.

Let us say we know that the sun has risen for a billion mornings. Tomorrow, if there be a tomorrow, will mark a billion and one. Then there are a billion and one events, or sunrises, under consideration, and only one of them is still in doubt. The chances of the sun's rising tomorrow are therefore a billion to one. If we know it has already risen a trillion times, they are a trillion to one. As knowledge increases, certainty approaches.

I have heard it objected that, according to this theory, the chance of a one-year-old child to live another year must be only even, while a man of 99 has 99 chances in a hundred of rounding out his century. This would indeed be true if we knew nothing about either babes or nonogenarians but their years. But we have a great deal of other information—statistics—bills of health. We must put all of our knowledge into the calculation.

Almost everybody is now willing to admit this method of reckoning probability when it is applied to dawns or to life insurance. It seems quite natural to say that we know the sun will rise again because, so far as we know, it always has risen; or to say that a baby has a longer prospect of life than has a very old man because we have

observed that babies generally live, while very old men generally die. But when we apply the same method to the calculations of certain other things—the behavior of our penny, for instance—we shall meet, strangely enough, with a lot of heretics. If a penny has fallen heads for twenty times in succession, there are those who will say that the chances of heads coming on the next throw are much worse than one to one. "It is time for a change," they will contend. And nothing can keep them, if sportingly inclined, from wagering their money on tails. But a mathematician will coldly bet on heads. *He knows that there is something the matter with that penny!*

So come what are known as "runs of luck,"—a subject apparently remote from that of free will, but not so remote as it seems. Runs of luck are the result of unknown influences; for if the influences are known we do not say "luck," we use a harsher term. The oftener a thing has happened before, the more likely it is to happen again. Some large force must be at work, or there would not have been the run. This is such an important rule that anyone who doubts it would do well to convince himself of its validity. He will in that way not only improve his mind, he will save money be he never so little of a "gambler" in the vicious sense of the term. Losers are always playing the stock-market and the world for "reactions" that "must come." Winners always "go with the trend." They are vicious only when their prizes are evil.

"But what," some will say, "of the change of luck which wipes out the winnings? What of those larger cycles which bring the smaller cycles to an end?" Just this. We know nothing of the larger cycles until we, or somebody whose word we can trust, has begun to experience them. Therefore our ignorance is complete in most

cases, and we have no chance against the larger cycles or rhythms at all—which is why sensible people usually keep out of the stock-market. Doubtless there is some larger cycle in cosmic events which will some day put out the sun. But unless we have somehow been able to put our finger already upon its pulse, we must ignore it in our calculations. We cannot bring it to book. When any one cycle has kept up a faithful performance as long as the sun has kept on rising, it must be a rather large cycle and is pretty safe to depend on for our remaining days.

But I did not enter into this digression merely to give a few tips on gambling, or the advice not to gamble at all when gambling can be avoided. The calculation of probabilities is of vast utility in matters infinitely more important than markets or games. With it mathematicians have put mere telescopists to shame. Give a mathematician the past course of a planet, and he will calculate its future course without taking the trouble to find out a thing about the nature of planets. This is no chimera. It has been done. The vagaries of the motions of a heavenly body fall into series; into cycles; into cycles within cycles. Accuracy in prediction is determined by accuracy and amount of past observations, and by nothing else.

But what has this to do with the human will? Everything. The so-called "laws" of science, including the Law of Conservation, are the laws of chance, nothing more. They are founded upon the behavior of great masses of particles, or the behavior of one or a few particles (more accurately, *particulars*) over long periods of time. As Lillie phrases it, the regularity of nature is a "statistical regularity," like the regularity of the statistics of suicide. It does not interfere with the freedom of the individual, of the particular. Here is the answer to Freud's absurd

statement that the attempt to reconcile human free will with divine omnipotence is always a failure. The actuary calculates the number of suicides that are going to take place—does he thereby compel you to kill yourself?

There is, of course, this difference between an actuary and Omniscience. The actuary only knows the total result. Omniscience must know the individuals who will help to make up that result. Omniscience knows just what we are, individually. Omniscience knows every Psyche, and knows what it will chose. I may know that a pair of dice are so loaded that they will always come up sixes. Is it my knowledge which compels them so to fall?

But some will say that if our human dice are loaded, it must have been God who loaded them, and that beneath that load free will disappears.

It might have been that way, I will admit. Omniscience, being also Omnipotence, might have loaded the dice, beyond question. Omnipotence was under no compulsion to grant free will to anything. But by the same reasoning, Omnipotence was free to withhold Its hand, and to let us determine to a certain extent our actions for ourselves. Even the finite mind has been able to see how this can be without interfering at all with that regular march of events which characterizes a cosmos in distinction from a chaos. A cosmos of free particulars will still have a "statistical regularity."

As a matter of fact, this system of delegated authority, of limited grants of real power, seems to run through all nature. The Commander-in-Chief leaves certain details to his generals; the generals leave certain details to their captains, the captains to their lieutenants. The private soldier has his particular duty to perform. And each one is held responsible for the performance of his own

duty within his own limited sphere of action—a duty which he is free to perform or to leave undone. Whenever an individual is rewarded or punished for something which he was not free to do or not to do, our natures recoil from what we term an "injustice." With no free will at all, any reward or punishment would be unjust. And it is to this sort of a world our materialistic psychologists and philosophers have been trying to introduce us. No wonder they shied away from the conception of consciousness. Sentience without freedom seems unjust. Even with limited freedom, it seems unjust. Man's sense of justice, therefore, has compelled him to regard this life as a fragment; to say that only willfully endured or provoked pains and privations are deserved, to believe in another life beyond the grave without waiting for further proof of it. Thus Dante was constrained to write even over the gates of Hell, *"Giustizia mosse 'l mio Alto Fattore."* [1]

If we return now to the doctrine of probabilities and to Lillie we shall find him nodding, for he says: "It already seems clear that many of the physical laws with which we are familiar in the realm of microscopic phenomena cease to apply on the scale where events are determined by the 'chance' fluctuations of molecular movement."

Chance here is clearly not the proper word. It contradicts his whole argument. Obviously he is using it in a very loose sense—much as behaviorists use it when they say that the first synapse between dendrite and axone in the brain is chance-determined. As a mathematician he must know that these isolated phenomena of the exceed-

[1] "Justice moved my High Maker," Dante's *"Inferno,"* canto III, line 4.

ingly minute are precisely those to which the law of probabilities cannot be applied. As much cannot be said of the behaviorists. Their attaching of the word "chance" to the word "synapse" is due to no slip of the pen, but rather to some regrettable individual action behind the synapse itself.

"Ultra-miscroscopic phenomena," Lillie goes on, in a way which quite confirms the foregoing explanation of his lapse, "thus give evidence . . . of control by individual action rather than by statistical or mass action. The laws relating to such [microscopic] action . . . assuming such laws to exist . . . are as yet imperfectly known. But they are certainly entirely different from physical laws."

This may seem remarkable, but after all it is only what we should have expected. In the ultra-microscopic world we are approaching individual action and leaving mass action, the average action of many individuals, behind. The illusion of bondage begins to disappear.

What makes this so important is the fact that we are so built that the minutest imaginable interior events may determine our largest actions. I lift a pound weight, but it was the movement of the all but impalpable particles of the brain which decided what the movement was to be. A touch upon the trigger fires the gun. And the force at the disposal of will needs to be only enough to move these tiny particles in the vital field. The trigger-touch, the precipitating circumstance, is traceable, says Lillie, "to ultra-microscopic events in the nerve cells." And it is precisely this fact, with the opportunity it offers for central control, which makes a man's behavior, even as to his body, something other than the result of a struggle of blind forces. Man is not a mass of particles like a dumb-bell.

There is, Lillie contends (and he is supported by Maxwell and Boltzman), "a smoothing off, or obliteration of detail" in "effects controlled by mass action." So we say that we lose ourselves in a crowd. "Mass action" represents the "sum of numerous fluctuating minutiæ." What we see is like a composite picture, with individual traits more or less obliterated. Excess in one unit is off-set by deficiency in another, so to our sight the individual is obscured. "The relation between a smoothed curve and the distribution of the points showing the individual data is a relation of a similar kind," he adds for the mathematically minded. And then he throws an almost literal bombshell into the determinist camp, with these words:

"Every now and then an unexplained catastrophe occurs in stores of high explosives. We know from observation . . . as well as from theoretical considerations of probability, that at infrequent intervals an internal molecular movement of unusual amplitude occurs. Such a movement may exceed the critical minimum below which no chemical reaction results,"—and so blow up the whole mass.

But what we are here interested in is that unexplained molecular movement of unusual amplitude. It is almost like coming upon the creative spark itself, and—as is frequently the case with creative sparks—the immediate result is destructive to existing conditions.

Not that I think that here is actually the naked finger of God. I am no Monist. So far as human experience, at least, is concerned, I believe that however far we pursue matter, either into its minute or its starry depths, it remains matter; and that spirit is separate and apart from it. The ultimate knot cannot be untied. The seamless veil

has been drawn too tightly across the face of Deity for it ever to be penetrated by physical science.

Call matter but force, if you will. Admit that even material force is of a spiritual nature, that its materiality consists in what we call its material effects. Nevertheless there is a gulf between those locked forces and spirit properly so-called. Saying that everything is God is only an indirect way of saying that there is no God—no God but what is locked up.

If all be matter, how can we, who too must then be matter, manage to contemplate the universe? We must conclude with Dr. Watson that we do not contemplate it. The same thing cannot at once be both subject and object. If all be spirit, then what separates us from the Great Spirit? Why is not our knowledge and comprehension, our power and our duration of days infinite and commensurate with ourselves here and now? For in the case supposed, we would ourselves be God. There would be nothing to come between.

Spinoza, who claimed that all is God, contradicted himself by calling his philosophy a philosophy, a search for truth. Were his theory true, we should not have to search. We would be already one with the All. Nor could any of the diverse phenomena of creation exist. There could be no separation between part and part, even in our sense perceptions. With nothing but spirit, out of what could those shadows, those lapses, those ignorances between this and that be made? Of nothing? But nothing is nothing. It is not even empty space, nor darkness, nor a shadow. Even the Vedantic philosophers had the wit to see that there must be a gulf between Brahma on the one hand and Vishnu and Siva on the other. They had no explana-

tion to offer. Modern would-be Brahmins have assumed that there is no inexplicable. Instead of rising to the Gospels, they have fallen below the Vedas.

Lillie seems not to have fallen into this error, for he says that "microscopic events" are determined by "submicroscopic events"; that "behind or internal to the submicroscopic events, we must assume a series of ultramicroscopic events reaching back by convergence into the field where the known types of physical determination are replaced by another type of determination, the special conditions of which we do not know." But as the action of the brain-cell determines the motion of the arm, so the action of something yet more minute determines the action of the cell, and so on until we come to the ultimate physical basis of the series. In this field of the physically ultimate, events are self-determined. They occur through no compulsion from without.

"If by free we mean externally uncontrolled, it would appear that the ultimate local centers or units of action should be independent of one another, i. e., a radical discontinuity should exist at the base of physical reality. Something of the kind seems to be indicated by quantum phenomena,"—phenomena of an ultra-minute variety. Men have often spoken of the eternal loneliness of the soul. Here we see that in this very loneliness lies its freedom. If it chooses to surrender this, for good or for evil, its surrender is still a choice.

And in conclusion, Lillie most rightly adds that one may "hesitate to call [this ultimate physical field]" the "metaphysical field," or the field beyond matter. Our author makes no attempt to taper his matter off into spirit merely by subdividing it. And he goes on:

"It would seem, however, that there must be some final

support or substratum of the physical to which only the term metaphysical can be applied." Which I take to mean that he believes in a substratum which is not physical. And having thus shown that back of matter experimental science feels that there is something else, and that we in our inner selves are quite free from external control, whatever compulsion may be put upon the actual motions of our bodies by things beyond our power, he rounds out his argument by saying:

"There is also the general philosophical position that the universe, considered in its totality, must be the expression of free action, since an all-inclusive whole cannot be determined externally, i. e., by conditions outside of itself,"—there being nothing outside of itself. In other words, not only are we free, but God is omnipotent; and the two facts, instead of being contradictory, are found to be but the different ends of the same chain of reasoning. Freud's dictum proves to be not quite so final as it seemed. Lillie has torn it to bits in a single article.

And had we not gone to Lillie we might have gone to Cassier, LeBon, Claude Bernard, Lucien Poincaré, or to any of a multitude of clear-headed scientists, philosophers and mathematicians. They may not give us all we seek, but they at least give us this. Let behaviorists and psychoanalysts say what they will, reason has not yet vanished from the world. Neither has unreason, for that matter—as the next chapter will show.

CHAPTER VI

THE FAMILY TREE

I. ARE MONKEYS PEOPLE?

NOBODY was ever humiliated by the seventh verse of the second chapter of Genesis, which says, "God formed man of the dust of the ground." But when Darwin wrote,[1] "There can . . . hardly be a doubt that man is an offshoot from the Old World simian stems; and that, under a genealogical point of view, he must be classed with the catarrhine division," —when Darwin wrote that the offense was general. Why? Certainly a catarrhine apé is higher in the scale of being than is the dust of the ground.

But the Bible account had added, "And [God] breathed into his nostrils the breath of life." Darwin left out any saving addition. So those who say today, "We came from the monkey," invariably mean that we were contained in the monkey even as an oak is contained in an acorn.

As a matter of fact, the oak is not contained in the acorn. An acorn is merely the means through which an oak may eventually become manifest. It is an instrument which enables an oak to become. The substance of the oak is still widely scattered when the acorn which is to be its parent falls from the tree. Some of it is in the soil;

[1] *Vide* "The Descent of Man," second edition, Collier and Son, 1905, vol. I, p. 205.

some of it is in the air; some of it is far off in the sun. The acorn is like a lens through which light bends to a focus. It is something which brings together parts of the earth, the air and the sun and welds them into the body of a tree. That something which we call life uses the acorn as a business man uses a little shop, a going concern which he buys as the foundation of a great department-store. But the shop could never become the store did the business man add nothing to it. The question therefore is, was the catarrhine ape the lens through which the elements of man were brought together? And what, if anything, was added which were not added in the case of the ape itself?

So stated, Darwin's theory loses most of its religious and therefore its popular significance. For the public in general is not interested in biology, it is interested only in God and in man's relation to God. Even atheists are interested chiefly in God, or they would speak of other matters and spend less time in denying Him. Even biologists and psychologists are interested chiefly in God, not in their own subjects. Otherwise they would not be forever straining to make a theology, though but a negative or devil's theology, out of what pretends to be science.

Whether it is orthodox to believe that we number monkeys among our ancestors, theologians must decide. Certainly the Church would not have to alter a single one of its major tenets nor a line of its ritual in order to include Darwinism among the articles of faith. Whether the dust of the ground evolved into ape before it evolved into man during those long periods which the laconic poetry of Genesis allows to slip by between the lines, or whether the change from dust to man was immediate, is

immaterial to the doctrine of the Fall of Man, which concerns man's subsequent history alone.

Darwin, himself, regarded his views of human descent as mere theories, useful for biological purposes. "Many of the views which have been [here] advanced," he wrote [2] "are highly speculative, and some no doubt will prove erroneous." Had the modesty of the great scientist been emulated by his disciples, we would have had no Scopes trial, and few of us would ever have heard of Evolution.

Even now that we have heard so much, few of us seem willing to take the trouble to find out what it is, or even to learn to distinguish between the theory of evolution in general and that particular theory of evolution which Darwin advocated. Considered broadly, evolution is merely the idea that living things—and even things which we do not ordinarily call living, including, perhaps, intangible things, like thoughts and feelings—appeared on earth in a certain order, the lower and simpler ones first. This idea is as old as the hills, and was fully set forth in Moses' account of creation.

Moses held further that the upward climb was interrupted at a certain point, and that another cycle, another upward climb, then began. But as neither the Fall nor Redemption are supposed to be biological, this line of thought does not concern us here.

A more narrow view of evolution regards the resemblances to be noted among things as the resemblance of children to parents. According to this theory, the tie which binds the universe together is the tie of heredity. Nebulæ give birth to suns, suns to planets, planets to the lower forms of life, the lower forms to the higher. The notion is not so popular among astronomers as it used to

[2] "The Descent of Man," p. 780.

be, but it is still dominant among scientists in general and biologists in particular. Nor can there be any doubt that evolution in this sense has been the supreme hypothesis of modern times. Curiously enough, the most extreme Darwinians among our literary scientists usually balk at it, holding that while man certainly must have had an ape for ancestor, thoughts, customs and sentiments can be generated spontaneously. They trace their brains straight back to the amœba, but claim to have minds which are brand new. They scorn any philosophy which cannot prove that it was born yesterday—or at least since the present period of prosperity began in the United States—and born out of nothing. "Men," says Albert Edward Wiggam, in "The New Decalogue of Science," [8] "have never been really righteous because they did not know how." Meaning, of course, that they didn't know how until the "New Decalogue" was published, which was in 1922.

Darwinism, itself, is the belief that the different species originated not only one from another, but that the difference now existing between one species and another is due to the slow accumulation of those minute particulars in which children do *not* resemble their parents; and further that these differences were preserved and added one to another through succeeding generations because they were useful from the first, increasing the likelihood that their possessors would survive and breed; while those not born with these variations, or had variations which were useless or perhaps harmful, would be killed off in the struggle for existence. This selection of fortunate individuals in a world where there is not room enough for all is called "natural selection," and variations which increase the chances of survival are said to have a "survival-

[8] "The New Decalogue of Science," p. 18.

value." Darwin did not pretend to know what caused variations. Darwinism is merely the theory that species originate by the accumulation of useful variations through natural selection, and that intermediate forms then die out, leaving gaps. Were none of the links missing from the record Darwin believed that it would now be impossible to tell where one species began and another left off.

The hypothesis itself was but a variation of an older one. Lamarck had taught that species originated gradually, but he held that it was chiefly through the inheritance of "acquired characters." Now an acquired character is something we are not born with, as for example, the ability to play the piano; and if it could have been proved that such acquirements descend from parent to child, Lamarckianism would have had smoother sailing.

But great pianists persist in having children born without the ability to play the piano, children who have to begin at the beginning just as the great pianists themselves did. Every effort has been made to demonstrate the contrary, but the facts are stubborn. The best that can be said for the theory of the inheritance of acquired characters is that, in some instances, if a single character is acquired by a sufficient number of generations there is a slight possibility that eventually it may begin to leave some trace of a hereditary nature. Hundreds of generations of rats have had their tails cut off without producing a natural-born tailless rat.

What looks like the inheritance of an acquired character always turns out to be a phenomenon which can be accounted for by early education. The Bach family was a family of wonderful musicians, but the Bach children

all received the best of musical training from the moment they could begin to lisp.

But Darwinism, though it would profit greatly could the heritability of acquired characters be proven, was especially constructed to get along with the heritability of inborn characters. To be a Darwinian it is not necessary to believe that the giraffe originated by the neck-stretching of a lot of prehistoric calves anxious to feed as high as possible upon the trees of the pasture. It is enough to believe that the calves who happened to be born with the longest necks were the most apt to survive, and that they passed their longer necks on, minus any acquired stretch, so that in each generation the accidental or unaccountable long-neck variations could begin at a higher level—and so on down, or up, to the present.

The theory works very well with the giraffe. Every fractional inch of additional neck seems to have a survival value. But unfortunately for Darwin, this is not the case with all variations. Many are useless or positively harmful until their accumulation has gone on until a new and workable mechanism is formed, and it is beyond the imagination of man to devise a way in which they can have been accumulated by natural selection. Fabre, the great French naturalist, pointed out hundreds of instincts among insects which could have had no survival value unless they were complete at the start—whole chains of instincts, each link positively worthless in itself. We are forced to believe that all the links arrived on the scene simultaneously and in perfect working order.

The body of man, to take another example, is—in so far as it varies from an ape's body—a variation in the direction of weakness. If the catarrhine, old world Simians

began once upon a time to have children a little more human in body than the catarrhines themselves, they at that very moment began to have weaker and shorter-armed children, less well calculated to survive in the struggle for existence. It may be argued that the half-human children survived because they had better brains. And it may be argued further that it was the deflection of energy to the brain which caused the rest of the body to shrink. This is at least imaginable. What is lacking is any positive evidence that half-human children ever arrived upon the wordly scene through the genitals of monkeys. The theory is merely a working hypothesis which works somewhat less well every day.

Will Durant, writing of Bergson,[4] says that "all his (Bergson's) criticism of Darwin has proved effective; the specifically Darwinian features of the evolution theory are now generally abandoned." This is too sweeping a statement. Hilaire Belloc hews closer to the line of truth when, in "A Companion to H. G. Wells' 'Outline of History,'"[5] he names 41 outstanding scientists who hold with Bateson that "for men of clear intellect Darwinism has long been dead." In other words, the old jolly row is still on, with the anti-Darwinians gaining ground but the pros still flying their flag. The flag, itself, however, shows some sign of accumulating variations.

This makes it the more surprising that Sir Arthur Keith should have seen fit, upon his election to the presidency of the British Association for the Advancement of Science, in 1927, to say in his Inaugural Address, "So strong has his [Darwin's] position become that I am convinced it can never be shaken." A hypothesis which

[4] "The Story of Philosophy," p. 506.
[5] *Vide* the appendix, pp. 115 to 117.

could not be shaken would be a unique thing in the history of science. And for his remark, Sir Arthur received the following congratulatory telegram: "We hail with joy your uncompromising championship of the ape ancestry of man. Your boldness and plain speaking will encourage atheists the world over."

No, this is not a message from a learned society. It came from The American Association for the Advancement of Atheism, popularly known as "The Four A's," an incorporation parented by Charles Smith, an attorney of Oklahoma, and Freeman Hopwood, of New Jersey. It claims a number of branches or chapters among the undergraduates in various colleges—chapters bearing such names as "The Damned Souls," of the University of Rochester; "The Devil's Angels," of Los Angeles, and the like. From time to time gems of thought reach the world from the Association's Headquarters, such as: "Edison believes in a Supreme Intelligence, but is a vice-president of the Thomas Paine National Historical Association." "Aristotle was what today would be called an atheist." "No wonder people above the intellectual level of a paramecium don't take any stock in Christianity."

The reckless use of language makes strange bedfellows. Surely Sir Arthur must have been a little intoxicated with his new honors to speak so much in the manner of a Grand Kleagle. He even went on and compared vital activity to what takes place in an automobile factory. "In . . . this factory," he said, "there is no apprenticeship. . . . Every employee is born, just as a hive-bee is, with his skill already developed. No plans or patterns are supplied; every workman has the needed design in his head from birth. . . . There is neither manager, overseer nor

foreman to direct and co-ordinate the activities of the vast artisan armies. . . . And yet there must be some method of co-ordination."

This factory without patterns or overseer, co-ordinated by a "method" with nothing to carry it out, must have been located in Russia in the days of Lenin. Even there we have yet to see automobiles producing spontaneous variations of a survival value, or big trucks begetting little roadsters which grow upon gasoline till they reach the size of their ancestors. We therefore seem to be a long way from the factory of life. But instead of myself attempting to take Sir Arthur to task, I prefer to compile a little dialogue out of extracts from his speech interlarded with quotations from a review of it written by the biologist, Francis P. LeBuffe.[6]

Keith (third paragraph of his address): "Owen . . . cited evidence which suggested a much earlier date for the appearance of man on earth than was sanctioned by Bible records."

LeBuffe (who is a member of the Society of Jesus): "He [Sir Arthur] ought to know that whatever calculations as to the age of man have been made from 'Biblical records' are entirely problematical, and that the 6006 years so frequently adduced as Biblical is merely the inference of scriptural scholars years ago."

Keith: "Darwin . . . succeeded in convincing himself that, immeasurable as are the differences between the mentality of man and ape, they are of degree not of kind. Prolonged researches made by modern psychologists have but verified and extended Darwin's conclusions. Huxley's 'Evidence of Man's Place in Nature' . . . settled for all time that man's rightful position is among the primates

[6] *Vide America,* September, 17, 1927.

and that . . . his nearest living kin are the anthropoid apes."

Le Buffe: "That man is a primate is as true in the doctrine of immediate creation as it is in the theory of evolution; and while a non-evolutionist would dispute the statement that the ape is man's nearest kin, he would admit that he is the animal that is the most like him."

Keith: "The evidence of man's evolution from an ape-like being obtained from the study of fossil remains is definite and irrefutable."

Le Buffe: "Let us take up the 'irrefutables' one by one."

And he does, describing minutely how the hunt for the "missing link" now stands. For brevity's sake I paraphrase his text as follows:

First Irrefutable: *Pithecanthropus erectus,* "one time inhabitant of Java." Irrefutable? Then why did Dr. Moir [7] state before the Berlin Anthropological Society that it did not differ essentially from other types of human skulls, and that it coincided very closely with that of Aurignacian man? Scott Elliot says, "The skull is considered a human skull by six . . . celebrated authorities, who for the most part are English. It is thought to be a missing link by eight, mostly French. It is considered an ape's skull by six others, mostly German. Only one authority makes the femur that of an ape, thirteen consider it human, and six make it out intermediate."

Second Irrefutable: Dawson's "Dawn Man." Irrefutable? What have we here? A shattered, imperfect braincase, part of the mandible and a canine tooth. Keith says that Sir Arthur Smith Woodward rightly recognized that the skull and jaw were part of the same individual. Then how do Waterson and Miller say that the jaw is a chim-

[7] Cf. *Journal of the American Association,* April 22, 1922.

panzee's and does not belong to that skull? and Hrdlička that it is human, but again does not belong to that skull? and Ray Lankester, who wrote to one, H. G. Wells: "I think we are stumped, baffled?"

And so on, until we have Keith repeating with approval the words of G. Elliot Smith, "The difference between the human and the ape brain is only quantative."

And Le Buffe responding: "Then why did Dr. Arthur S. Woodward say 'We cannot of course go by the size, for the Neanderthal man has a larger brain cavity than some of us at the present day. It is quality not quantity that counts'? That is surely true, we hope, as the heaviest brain ever found (weight, 2850 grammes) was that of an epileptic idiot."

Here is a true picture of the state of modern science as it relates to man—a few disputed bones and any quantity of disputed conjectures. Keith's picture is obviously false. He should visit the excavations at Glozel, France, where the findings are declared by some savants, *"du mérite le plus incontesté,"* to be of the *époque néolithique"*; and by other savants, *"dont les travaux font autorité dans le monde,"* to pertain not to the neolithic but to the *"époque néo-fumiste."*

But what if someone were actually to find the missing link? It would be merely a skeleton intermediate between that of ape and man. It would prove nothing; settle nothing. What is needed is the spectacle of a female monkey in the act of giving birth to a human child; and as nobody claims that well-bred monkeys do that sort of thing nowadays, the prospect is not hopeful.

Yet Albert Edward Wiggam says in "The New Decalogue of Science" [8] that the "Darwinian generalization,"

[8] "The New Decalogue of Science," p. 91.

after a "battle with entrenched opinion, authority, prejudice and vested interests, has at last received the universal assent of practically all educated men."

I do not see how a "universal assent" can include "practically all," if by that is meant anything different from simply all. But this is tabloid, pre-digested science, with the hulls of opposing opinion carefully removed. The implication is that non-Darwinians, however eminent, are *ipso facto,* ignorant. Those who do not feel themselves properly brow-beaten must have thicker skulls than *Pithecanthropus erectus.* But I think Mr. Wiggam is here showing a variation from the paramecium of very doubtful survival-value.

Since Darwin many efforts have been made to improve his theory by supplementing it with others. Hugo DeVries, for example, believed that he had solved the problem of the survival of variations which need to be complete before they can be useful. He discovered a bank of evening primroses on an English hillside which seemed to be in the very act of producing new species—not by degrees but all at once. It was announced throughout the world that organic evolution had proved itself experimentally, though not along Darwinian lines. The variations here were too marked to be called variations, so they were called "mutations."

But the primroses were but hybrids, and what had been seen was not the evolution of new species but the action of the law of mixed heredity long before formulated by Mendel. The new species were only throw-backs, revealing hereditary traits which had been latent in their immediate ancestors, as when a boy resembles not his father but his grandfather.

More recently a school of biologists has risen whose

members call themselves "Emergent Evolutionists." According to their idea, the finger of God occasionally "emerges" so plainly that man can see it. Here again we have the idea of sudden mutations, where the ordinary course of events seems at certain points to be broken by the impulse of a higher law—as when life, sensation, reason, or man first appeared. Alfred Russell Wallace, Darwin's co-discoverer of the "law" of Natural Selection, laid the foundation for this conception as long ago as 1889. More recently men like Lloyd Morgan; General Smuts; Herbert Spencer Jennings, of Johns Hopkins University; Sir Bertram C. A. Windel, professor of anthropology in Saint Michael's College, Toronto, and many others, have sought to give Emergency its place among the recognized hypotheses of science.

But, as far as I am aware, it has never yet been completely stated, nor any logical reason given why the emergence at one point in the evolutionary scale differs except in degree from the emergence of any event, even the most trifling. Once we accept the belief that matter is a mere instrument in the hands of something which is not matter, it seems necessary to regard all phenomena as the emergence either of the direct power of God or of the will of some creature to whom has been delegated a limited freedom. If this be the underlying idea, then a special emergence might be defined as one of so marked and rare an importance that it stands out from every day happenings, forming part of a broader rhythm whose beat is apparent only when all the great emergences of which we have evidence are taken together. Or it may go even beyond this, and stand as an event unique in man's experience, constituting what we call a miracle.

The advantage of the theory of emergent evolution is

that it furnishes the evolutionary process with a power capable of bringing it about, while the idea of matter evolving itself implies a universe trying to lift itself by its bootstraps. It also removes the difficulties of time (of which there is never enough for thoroughgoing Darwinians) and of finding survival value for half-developed mechanisms.

"Bien des choses s'expliqueraient si nous pouvions connaître notre genéalogie véritable," wrote Flaubert—much more wisely than he knew. Perhaps not only many things but nearly everything will be explained from the moment our true genealogy is recognized. But it must be our true genealogy, not a part of it. Emergent Evolution permits us to have our place in the natural order, and yet remain children of God. The soul may be the greatest—or next to the greatest—emergence of all.

Is it such a distressing idea? That should not trouble the realists, for they notoriously attribute reality to things in proportion to the amount of unpleasant odor which things exhale. Thus they unite with the Hindus in considering life a curse. Matter taken by itself certainly is either painful or boresome, and if one wishes to stop with the half and consider only matter as real, I know of no way in which one may logically escape despair.

The trouble with the idea, then, is that it is not distressing. The moment we agree that something more divine may emerge through matter, or at least thrust up beneath it till matter rises here and there to a glorious psychic mountain peak ("emergence" is not quite the right word, for there still remains the material covering) —from that moment even evolution loses its repellent features. From that moment the greatest thinkers of all the ages are on our side—which is sometimes a comfort.

We develop a strange capacity for happiness. Is this an evidence that we are fools?

"Le malheur," says Paul Bourget in *"L'étape," "démontre l'idée fausse, comme la maladie la mauvaise hygène."* [9]

That probably is not conclusive reasoning if you are not convinced beforehand. But why is happiness any more apt to be the result of illusion than is misery? We do not say that the best body is the one which suffers the most pain. Have not the pessimistic philosophers accustomed us to some strange and monstrous inversion of thought?

Let emergence, then, have its way. We are no longer contained in our physical ancestors. The man is not even contained in the child. We change from day to day. There is a continuity, yet it is added to—or subtracted from. The soul accepts this and rejects that.

So Psyche rebuilds her house, continually tearing it down and reconstructing it. Sometimes the lighting system gets out of order. Fuses blow out—and we say she is mad. Sometimes the house falls, or burns, or succumbs to a flood—and we say she is dead. And from the dead house some conclude a dead Psyche, or that there never was a Psyche—which is like concluding that, if the telephone line goes dead, it proves that there never was anybody talking at the other end except the batteries and the wires.

No; monkeys are not people, no matter what kind of children they may have had. Nor are people monkeys—not to the extent which Mr. Wiggam seems to suppose.

[9] "Unhappiness indicates wrong thinking, just as ill health a bad regimen.

2. BURBANKING THE HUMAN RACE

The effect of Darwinism has been to popularize an exaggerated idea of the importance of heredity. Darwin, of course, depended quite as much upon environment to select his variations as he did upon heredity to hand them down. But it is from Herbert Spencer, not Darwin, that most people have acquired their Darwinism, and it so happens that Spencer was not primarily a Darwinian but a Lamarckian. "The Origin of Species" was not published until Spencer was a middle-aged man.

Therefore an immense amount of confusion has arisen in the minds of amateur biologists, and a tendency to believe in heredity as the destiny which shapes our ends. Hence the Eugenists. Hence this Mr. Albert Edward Wiggam, already referred to.

The idea of dominant heredity is flattering to parents, who like to think that they live again in their children; who are unwilling to grant that children have souls of their own. It pleases those scientists who still hope to prove that acquired characters are handed down. It pleases determinists, who see here another way of making us slaves to something. It pleases those naturalists, who have acquired their ideas of man from the study of animals, plants and insects. And as animals, plants and insects form the readiest subject for experiment, it pleases materialistic biologists in general.

But reasoning from lower forms of life to higher is reasoning by false analogy. Luther Burbank, a great artist with plants, worked wonders in his garden; and in his book, "The Harvest of the Years," he expresses the regret that his methods could not at once be applied to

human beings. But Burbank was not a scientist, not a thinker, but merely a super-gardener, incapable even of keeping an accurate account of his innumerable experiments. So it is not remarkable that he failed to realize that when we say what is sauce for the goose is sauce for the gander we are speaking of beings of the same order, while man and plants are not of the same order.

If heredity be dominant in the garden, it does not follow that it is dominant even in the menagerie, let alone in the street. Conclusions arrived at in the study of insects are not necessarily true of Indians. Indeed, there is every reason to believe that man, because of his long period of infancy, is much less determined by heredity than is any other form of life. This in itself knocks the foundation from under nine tenths of the arguments we hear upon the subject.

Even profound changes in the body may be produced by (or with the aid of) environment. The third generation of immigrants to America are said to have higher cheekbones—that is, to be more like redmen—than the immigrants themselves. The discovery of the functions of the ductless glands shows how food, or the manner of life, may be at work in cases where germ-plasm used to get all the credit. The notion that heredity is destiny has altogether broken down.

Says Professor Herbert S. Jennings, of Johns Hopkins, in an article entitled "Heredity and Environment" in the *Scientific Monthly* for September, 1924: "Clearly it is not necessary to have a characteristic merely because one inherits it. Or more properly, characteristics are not inherited at all; what one inherits is certain material that under certain conditions will produce a particular characteristic; if those conditions are not supplied, some other

ALBERT EDWARD WIGGAM
The Devil take the hindmost!

characteristic is produced." Thus heredity becomes a mere capacity—and that we do inherit certain capacities need not be denied.

The fundamental laws of heredity were first made known in 1866, when Gregor Mendel, a monk of the Augustinian order, read his now world-famous paper upon heredity in plants before the Naturalists' Society of the little town of Brünn, in Moravia. He had made more than 10,000 observations upon the peas growing in the garden of his monastery—wonderful observations. Their results, too complicated to be fully described here, may be sufficiently summarized in a few words—and in order that there may be no mistake, I shall take the words from Mr. Wiggam himself,[1] omitting only his running comment:

"If you cross tall peas with dwarf peas the offspring will be as tall as the parents. The dwarfness has completely vanished. If you cross these tall offspring back with a dwarf, one-half of the offspring of this cross will be dwarfs and one-half will be talls. However, instead of crossing the talls back with dwarfs, if you place capsules over their blossoms so they will not get crossed, and then sow their seeds, one-fourth—not one-half—of their seeds will come up dwarf and three-fourths will come up tall."

In this case, tallness, because it supercedes dwarfness in the first generation, is called a "dominant" trait, and dwarfness, because it disappears, is called a "recessive" trait. As Wiggam correctly says,[2] the fundamental principle is that "the units contributed by two parents separate in the offspring without having had any influence on each other," or practically none. A trait either shows in the

[1] "The Fruit of the Family Tree," pp. 22 and 23.
[2] *Op. cit.*, p. 30.

offspring, or it does not show. And where the inheritance is hybrid, the reappearance or disappearance of traits may be calculated, given a sufficient number of instances, by application of the law of greatest probability.

Everybody knows that one may inherit a Roman nose from a grandfather even though one's father's was a snub and one's mother's retroussé. The mathematical implications are amazing. But all that I wish to call attention to is the fact that we all are hybrids, and that unless our ancestry for many generations back is known to the minutest detail it is utterly impossible to calculate the hereditary phenomena to be looked for in our children.

Mendel believed in unit characters, but it has been found that unit characters, such as blue eyes, are far from being units and are made up of an unknown number of smaller units. This greatly increases the difficulty of even guessing what hereditary possibilities the children of any given couple will receive. Nevertheless, twenty-three states have already, at the behest of eugenists, passed laws permitting the sterilization of the "unfit" by means of enforced surgical operations. And under these laws, 6244 operations have actually been performed—and my statistics are of the year 1927 and not complete at that! What is the idea? I will let Mr. Wiggam explain.

"The Nordic elements of our population are being forced out by other races whose representatives in this country are of distinctly lower average mental alertness and of less social coherence and political capacity." [3]

"This race has contributed a vast share of all political wisdom and scientific discovery to the modern world. It is probably the one race on earth which has steadily ad-

[3] "The New Decalogue of Science," by Albert Edward Wiggam, p. 35.

vanced in these respects for the past several thousand years." [4]

"Cattell has shown that in America not a single day laborer's son has become a man of scientific distinction. The wholesale rise of the masses to power may be the death knell of their biological progress. Like a bottle of old wine, which, when uncorked, for a time sparkles and fumes with life but soon becomes inert and stale, so it seems that men, when freed from oppression for a time, bubble with genius. But ambition is sterilized by its own success. Indeed, without biology as the basis of social processes, success spells failure and achievement brings decay. Like caged animals, those who rise cease to breed." [5]

"There were one hundred two Pilgrims who came over in the *Mayflower*. . . . No finer stock to found a great national breed of men and women ever set out to sea." [6]

"The genealogy of 12,722 New England wives of the old Colonial stocks. In one hundred twenty years their blood has been vanishing from the racial stream as follows: 1750–1799, children per family, 6.43 . . . 1870–1879, children per family, 2.77. . . . There is the story of the decline of the old American stock." [7]

"In 1920 the school-teachers of America who had had any children had given birth to 2.2 children per family; the bootblacks had come within one-tenth of giving birth to four! . . . This crude birth rate, however, does not measure to the full the relative contributions of bootblacks and school-teachers to the citizenship of tomorrow. Nearly

[4] *Loc. cit.*
[5] *Op. cit.*, p. 38.
[6] *Ibid.*, p. 179.
[7] *Ibid.*, p. 180.

all bootblacks marry and have children, while scarcely half our school-teachers ever marry at all." [8]

"In this same year, 1920, the lawyers and judges of America who had families had 2.2 living children, while janitors and sextons had 3.4; authors, editors and reporters had 2.1, workers in stone quarries and gravel pits 3.6." [9]

"Every school child knows that Burbank, Schull, Hanson, Davenport and others achieve their triumphs solely by selecting the best specimens as parents. Farmers ever since Eden have done the same thing. . . . But, suppose they bred chiefly from their worst! Well, that is precisely what America . . . is doing." [10]

There is the situation. School teachers are practicing either celibacy or birth-control; bootblacks are not. Janitors and sextons and workers in gravel pits are breeding lawyers, editors, authors and reporters off the map. The masses are rising, like an uncorked bottle of old wine and bubbling with genius. Up till now they have not produced their first distinguished man of science, but there is no saying what may happen if the bubbling continues. Fecundity is passing from New England wives, from the captain's lady, and descending to Mrs. O'Grady. The radio, invented by the "Nordic" Marconi sends out the S.O.S. What is to be done?

The remedy is very simple. Castrate as many of the masses as may be necessary to enable the biologically "superior" to keep up in the race of life with biologically (and socially) "inferior."

No, Mr. Wiggam does not openly advocate any such

[8] "The New Decalogue of Science," p. 172.
[9] *Ibid.*, p. 173.
[10] *Ibid.*, 173.

crudely frank measure. In the first place, the operation is called asexualization, and leaves the subject free to uplift the morals of the community by sexual activity complete in every detail except the minor one of fruitfulness. And in the second, the choice of life-imprisonment is to be offered in certain instances to the eugenically condemned.

Who is to do the condemning? And what are the requirements for passing the examination?

"Unless you can measure men you cannot select them," says Mr. Wiggam.[11] "It is often said that eugenics is hopeless because it does not know what it wants in human nature—it has no ideal. To this Dr. Morton Prince of Boston aptly replied: 'Yes it has; it wants such men as William Graham Sumner and William James.' This certainly sets a lofty ideal. . . . Yet, in all soberness it is doubtful if we want a whole race of such men. Men like these would doubtless clean our streets and remove our garbage a hundred times better than it is now done, but they could not at the same time be teachers, writers, lecturers and philosophers, unless perchance a society of such men would be so perfect that the street cleaner and philosopher would willingly interchange their tasks from hour to hour or from day to day. Pending such a possibility, however, eugenics is content with a much less but more inclusive ideal, namely, the increase of health, sanity and energy."

This is a little obscure to me. It is difficult to picture William James (or Henry, for that matter) as a superlative street-cleaner. But the goal of the eugenist seems clear—health, sanity and energy. These are excellent things. But as Mr. Wiggam estimates—by what method

[11] *Op. cit.*, p. 136.

I do not know—that we owe to heredity fully nine-tenths of what we are, it would not seem advisable that the name of an invalid should be made to perish from the land of the living until we are able to know much more than we can as yet possibly know of the quality of the "germ-plasm" we are dealing with.

Energy presents another difficulty. The rattlesnake possesses considerable energy, and is usually in good health. Chicago's gunmen are energetic enough in all conscience. Obviously the direction of energy will have to be taken into consideration. And here again we are confronted by the question, Who is to decide what directions are right and what directions are wrong?

"Let us," says Mr. Wiggam,[12] "see to it that those to whom our sympathies have extended the privilege of a happy life instead of sounding for them the death knell of the jungle, shall not have the high biological privilege, which should always run parallel with social privilege and always be under social control, namely, the privilege of reproduction."

Never before in the history of the world has the idea of special privilege reached such heights as this. Through our "sympathies" we have, it appears, extended to certain persons we do not approve of the "privilege" of a happy life instead of killing them outright as we perhaps should have done. But we are not to allow our sentimentality to carry us so far that these persons shall have the further "privilege" of reproduction.

In "The Fruit of the Family Tree," [13] Mr. Wiggam, speaking to women voters, says that he does not care to outline for them "any complete eugenical program." Then

[12] "The Next Age of Man," p. 126.
[13] "The Fruit of the Family Tree," p. 300.

he continues: "The very nature of the vast problems themselves . . . indicate what such a program is bound to be. As one first plank in her program, most assuredly, the woman voter should advocate a survey of the human family. . . . The pedigree of every family in America should be put on record. . . . These family histories would be among the most priceless archives of the nation, for it is upon the biological assets of the nation that all truly statesmanlike legislation must be based."

Legislation again! Mr. Wiggam does not favor the Eighteenth Amendment—for the curious reason that he believes alcohol dangerous to but a small fraction of the population and that indulgence by all would tend to exterminate those weaklings who do not carry their liquor well—doubly curious reasoning considering the splendid efficiency of prohibition liquor as an exterminator. He thinks (as I do, for that matter) that Prohibition was a great mistake. Yet he is doing more than any other one man in America today to further another prohibition movement compared with which Volsteadism is a mere trifle. His books sell by the tens of thousands. He has become one of the signs of the times. And he wants legislation to make the "privilege" of having children run parallel with "social privilege." Family histories doubtless contain much interesting information—they have even been known to contain manufactured information. When they become the *sine qua non* of full citizenship the artificial growing of suitable family trees will doubtless make bootlegging look like a very minor member of our great national industries.

But we begin to see who is to do the choosing.

"Another plank in woman's eugenic platform should be the establishment in every state of a State Board of Hered-

ity and Eugenics. This board would work in cooperation with the State University, the Boards of Charities and Correction, the State Prison Board, the Department of Public Health and indeed with every agency of social uplift and advancement. It would have on its staff expert psychologists [Freudians or Behaviorists?] biologists and statisticians for the direction of measures of public mental hygiene, the mental survey of schools and the prescription of minimum mental requirements for marriage." [14]

And these agencies (with of course the coöperation of the Eugenic Society) will measure our health, sanity and energy. The opportunities for graft are so staggering that it seems impossible that the more energetic among us will rest content till the whole plum is theirs—for as yet eugenic legislation applies only to the inmates of public institutions, like jails, poor-houses and asylums. Mr. Wiggam has shown the way to a mine that ought to be worth a mountain's weight in solid radium.

Under such circumstances it is perhaps idle to ask what is the biological warrant for this worship of heredity? We are face to face with a political and social, not a scientific, movement.

Yet Mr. Wiggam is a good biologist—at least he is able to quote a great deal of good biology. And so long as he confines himself to observed facts he is both instructive and interesting. But biology mingles with the bread of its facts an intolerable deal of the sack of deduction, guessing, theory and surmise. Mr. Wiggam seems to state facts merely for the privilege of reveling in subsequent "reasoning." And his reasoning is of such a character that for a long time I mistook him merely for

[14] "The Fruit of the Family Tree," p. 301.

one of those sprightly writers from whose mental equipment the handicap of logic has been happily left out. But I wronged him. There is method in his madness. He wishes, I believe, to camouflage the strong meat of his doctrine so that we babes may not too abruptly recognize what sort of cuts are being offered us.

Thus he says,[15] "Eugenics is . . . not killing off the weaklings. Not a scheme for breeding supermen. . . . Not a scheme for breeding human beings like animals. . . . Not a departure from the soundest ideas of sex morals."

Then what is it?

"Eugenics is a method ordained of God and seated in natural law for securing better parents for our children. . . . Modernizing the definition of its great founder, Sir Francis Galton [who was a cousin of Darwin], eugenics is the study and guidance of all those agencies that are within social control which will improve or impair the inborn qualities of future generations." [16]

"Guidance," again—i. e. legislation. But the bitter pill has been presented in a sugar-coating. And in another place in this same book he goes so far as to say, "Had Jesus been among us, he would have been president of the First Eugenics Congress." [17]

If I may be permitted to extend this gratuitous blasphemy so as to connect it with facts, I wish to point out that when Christ did live he was crucified by precisely the healthiest, sanest and most energetic of his contemporaries, measuring these qualities by eugenic standards. A bill declaring Him both insane and criminal could un-

[15] "The New Decalogue of Science," p. 100.
[16] *Ibid.*, pp. 100–101.
[17] *Ibid.*, p. 110.

questionably have been put through the Jewish Sanhedrim without a dissenting vote.

What is insanity? The sterilization of the insane is the strongest appearing plank in the whole eugenic platform. Yet even here troubling questions arise, bidding us stay the knife. And what is crime? For eugenists are sterilizing criminals also—and in at least one instance the crime was "drunkenness."

I once wrote to a prominent eugenist in hopes of finding out what makes a crime a crime—and I did find out. He told me that the essence of crime was non-conformity. He had hit the nail squarely on the head. That is the essence of crime exactly, non-obedience to some law. But what law? Here my correspondent showed himself to be entirely at sea. He could refer to nothing but the statute law momentarily in effect in the place where the crime was committed.

Are we to preserve one sort of germ-plasm in California and another in Massachusetts? A willingness to conform to any and every statute which a legislature anywhere may see fit to pass is certainly a curious test of human virtue, of the right to leave an impress on future generations.

As to the nature of insanity, my correspondent was willing to leave it to the doctors—more especially as Prof. Lombroso, then quite prominent, had lately identified it with genius. Mr. Wiggam has a theory of both crime and insanity which at least removes all vagueness from the terms. Whose germ-plasm is to be allowed to go on down the ages? The germ-plasm of those who have been able to get named in "Who's Who!"

3. SALVATION BY WHO'S WHO

I admit that this is an exaggeration—at the present moment. Eugenists assure us that they mean to be very temperate. But we know from experience how temperate a reform movement is likely to become, once it is fairly launched.

In substance, the "Who's Who" theory of unnatural selection is actually developed in a series of articles by Mr. Wiggam reviewing Professor Lewis M. Terman's "Genetic Studies of Genius," which appeared in *The World's Work* during 1926. As usual, Mr. Wiggam beguiles us for a time with pleasant writing. In this instance it deals with the old legend of the poor country-boy and his supposed chance of becoming distinguished. A formidable array of statistics is brought out to show that it is not much of a chance. The advantage, it seems, all lies with city-children—stimulated, as they no doubt are, by breathing the fumes of gasoline.

Three per cent of the people (and these belong to the "professional classes") have in America produced nearly one-half of our artists, we are told. One third of the population (described as being "above early struggles") have been responsible for three-fourths of America's writers. Something must be the matter. Too much struggle it would appear. Writer-bearing strata are to be pampered. Good!

Some, of course, will say that what American literature is waiting for is a few more words from the two-thirds of the population who are not above early struggles—that even some of our rich and famous authors wrote better when they were young and poor. But as I do not

know the pedigree of these objectors I shall pass them by and follow the Wiggam argument as he finds it in Terman.

"Superior intelligence," says Professor Terman, himself, "is approximately five times as common among children of superior social status as among children of inferior social status."

The flaw in the argument here is of course forgetfulness of the fact that, whether intelligence descends or not, tradition undoubtedly does. This same flaw emasculates the eugenic argument everywhere. It saps the force from Mr. Wiggam's eulogy of the Edwards family in the first chapter of "The Fruit of the Family Tree." He himself admits that in Doctor Winship's study, which he makes the foundation of his own, "the factor of heredity has not been completely separated from the factor of environment." [1] And he goes on:

"One can readily imagine that the twelve college presidents that have been in the [Edwards] line of descent might not all have been men who were really great educators or executives. Some of them may have attained the official position by the fact that their relatives may have been trustees of the various colleges, and simply voted them into office. Yet an immense part of the distinction of the Edwards family, beyond question, has been due to their superior natural qualities. We know this partly from the great achievements of many of the members; and also we know from studies of other families, where the factors of heredity and environment have been adequately separated."

Great achievements? Certainly. But does not family tradition, pride and culture play its part in great achieve-

[1] "The Fruit of the Family Tree," p. 20.

ment? Did not Harry Leon Wilson's immortal Bunker Bean do wonders spurred on by the mere illusion that he was descended from an Egyptian mummy? And who has "adequately separated" the factors of heredity and environment in the history of any family? If Freud and Watson have done nothing else, they have shown the immense importance of *very early* training. The technic which will separate the effects of blood from those of education and example has yet to be devised. And tradition, or the lack of it, must be taken into account before we draw conclusions from the history of so-called "degenerate" families, the Kallikaks and the Jukses. Who can pretend to interpret the heredity of such unfortunates when the very point of the whole argument is the fact that they were prostitutes and thieves?

Family tradition derives from the inexhaustible springs of human shame and human pride. The blood even of the super-man tends to get thin, very thin, through successive generations. "Conification" doubtless thickens it, for conification is the tendency of like to marry with like. Mr. Wiggam advocates cousin-marriages to help conification along. Logically he should advocate incest pure and simple. In discussing the Pharaohs he does have a good word to say for it, but he warns us that it is baneful when practiced by any but the best families.

But one's chief objection to the eugenist's argument is its deficiency in good faith. Wiggam admits that he has presented only "star cases." What he does not admit is that he has presented them incompletely. Thus of Elizabeth Tuthill, first wife of Richard Edwards, the Connecticut lawyer who founded the distinguished branch of the Edwards clan, he says only [2] that she was "a marvel-

[2] *Ibid.*, p. 16.

ous girl." Horatio Haskett Newman, professor of Zoology in the University of Chicago, in chapter XLIV of his "Evolution, Genetics and Eugenics," [3] adds the following details:

"Elizabeth Tuttle [so he spells the name], grandmother of Jonathan Edwards . . . is described as 'a woman of great beauty, of tall and commanding appearance, striking carriage, of strong will, extreme intellectual vigor and mental grasp akin to rapacity, but with an extraordinary deficiency in moral sense.' She was divorced from her husband on the ground of adultery and other immoralities. The evil trait was in the blood, for one of her sisters murdered her own son and a brother murdered his own sister. Richard Edwards married again after his divorce and had five sons and one daughter, but none of their numerous progeny rose above mediocrity."

Mr. Wiggam agrees with this latter estimate, for he says, "Later in life Richard Edwards married Mary Talcott. She was an ordinary, every-day, commonplace woman. She had ordinary, every-day, commonplace children. The splendid heredity of Richard Edwards was swamped by the mating." [4]

So, if the eugenists had been in control three hundred years ago, Mary Talcott would have been allowed to marry. But Elizabeth Tuthill would have been refused a marriage license even had she escaped a worse fate. Crime and insanity seemed to have marked her for their own. And yet it was from her, not from the normal Mary Talcott, that descended (I quote from "The Fruit of the Family Tree," page 17): "Timothy Edwards, one

[3] Page 602. He is quoting in substance from "Human Conservation from Genetics," by Herbert E. Walter.
[4] "The Fruit of the Family Tree," pp. 16–17.

of the founders of Yale University. He was the father of Jonathan Edwards. From Jonathan Edwards, who married also a wonderful woman, Sarah Pierpont, have descended 12 college presidents, 265 college graduates, 65 college professors, 60 physicians, 100 clergymen, 75 army officers, 60 prominent authors, 100 lawyers, 30 judges, 80 public officers—state governors, city mayors and state officials—3 congressmen, 2 United States senators and 1 vice-president of the United States." And he goes on to mention other notables in this line of the family, including Aaron Burr; Mrs. Eli Whitney; Winston Churchill; Edith Carow [widow of Theodore Roosevelt and mother of his daughter Ethel and of his four sons]; Robert Paine: the Marchioness of Donegal; the Fairbanks brothers (of platform-scales fame); Melville W. Bigelow; Morrison R. Waite (former Chief Justice of the United States); Bishop Vincent (founder of the Chautauqua movement); George Vincent (head of the Rockefeller Foundation); Grover Cleveland; and U. S. Grant.

The only thing which Mr. Wiggam omitted was the trifling circumstance which shows that The Eugenics Society would, if it could, have inadvertently prevented each and every one of these notables from coming into being.

Yet he thinks that he has discovered a way of distinguishing between the influences of heredity and of environment—when applied to families.

"Environment," he says,[5] "is important in determining character, but precisely how important I doubt very much if we have any means at present for determining, when it comes to one individual, whether we consider one particular act or the sum total of his character. . . . I doubt if

[5] "The Fruit of the Family Tree," pp. 332–333.

we shall ever be able to determine whether a particular act by a particular individual, say whether he takes a drink of alcohol . . . or whether he commits a crime, is due to his heredity or to his environment. The causes are so hopelessly intertwined that no one so far as I am aware has presented the slightest hope of measuring the relative influence of the two forces *within the individual.* . . . For all we know a man may commit a particular crime or take a particular drink entirely from environment. . . . But when it comes to the question as to which one of two individuals is the more likely to commit a crime at some time in his life or take to excessive drink, we are in reality dealing with a different set of scientific problems. And when we come to the question as to which family is likely to have more members who, in any one age of the world, will be unable to adjust themselves to sound social behavior . . . we are in a field where we can measure the factors involved by fairly exact methods."

That is to say, we can measure results—after they have happened. It may even be granted that we can calculate roughly a family's likelihood of producing distinguished descendants, basing the calculation on past performance. But obviously this in no way decides between the relative importance of environment and heredity. The question as to whether the family's distinction came from its blood or from its traditions remains precisely where it was. Mr. Wiggam's reasoning is quite of a piece with his reliability. He himself exclaims [6] about "the very, very few people in the world who can think . . . the enormous number of people who cannot think, but who think they can think, and who mistake their mystical half-knowledge for social wisdom and act upon it."

[6] "The New Decalogue of Science," p. 275.

What "mystical half-knowledge" may be I do not know. Mystical knowledge, being intuitive knowledge of God, is by its very definition complete knowledge or nothing. One must accept or reject it *in toto*. Mr. Wiggam also uses this word as a term of reproach when [7] he says, "Vitalism usually leads its adherents to mysticism." But he declares himself to be no mechanist. "I have no personal objection to a purely mechanistic description of the life process itself. I have been so far unable to see, however, how stimuli which are inconsistent and unrelated can build up consistent and controlled behavior." [8] And he adds: "While I believe biology has triumphantly demonstrated the mechanistic nature of the life processes themselves, it has hopelessly failed so far to explain to me thought and behavior. I see no explanation of this except some sort of dualistic conception . . . a universe in which there is something which is not aimless mechanical force. We can call this substance 'mind' or 'spirit' or any other convenient term." [9]

This is his perfectly valid objection to Watsonian behaviorism. But he does not seem to see that the use of such convenient terms as mind or spirit is in its very essence mystical, nor that admitting a mystic vitalism puts in his hand a means for freeing himself from the tyranny both of environment and heredity. If there be spirit, man may have a soul. It may be the choice of this very soul which controls the strange selection of traits from the parental "chromosomes," or carriers of heredity, which he so eloquently describes. That this choice follows in the long run the law of the greatest probability is what such

[7] "The Next Age of Man," p. 133.
[8] *Ibid.*, p. 132.
[9] *Ibid.*, p. 134.

a hypothesis would lead us to expect. Thus Psyche would not only build and rebuild her house, but in a measure select her building materials from the very start. Mr. Wiggam thinks that the idea of a dominant environment flatters parents, just as I think that the idea of a dominant heredity flatters them. Perhaps we can both unite in believing that the idea of power-owning individual souls in children flatters nobody and appeals to something much higher than the instinct of self-regard.

According to a statement prepared by Professor Irving Fisher, of Yale,[10] the Second International Congress of Eugenics appointed as long ago as 1921 a committee (of which he was chairman) to organize the eugenics movement in the United States. Since then the movement has been competently engineered, its avowed objects being education, selective immigration laws, the elimination of defectives, the "proper direction of research," and the securing of legislative and administrative aid.

Professor Fisher says, "The Eugenics Society would like to see every school, college and Chautauqua give regular courses in eugenics. . . . Some laws need to be passed and a eugenical code established. . . . This depends very largely upon education of the legislators."

So "education" does not mean a campaign for human betterment through education. It means a campaign to educate people to vote for human betterment through eugenic means—such as "the elimination of defectives," "selective immigration" and "proper" research. "By cutting off the defectives," says Professor Fisher, "the general average of our people can . . . be raised." We know without telling, from memories of the prohibition cam-

[10] *Vide* "The Fruit of the Family Tree," appendix.

paign, how legislators can be "educated." A "eugenical code" would naturally provide conditions under which marriage licenses would be granted. We are dealing here with no chimera but with a party with plenty of power, influence and money already at its disposal. The question of "who is to choose" seems already to have been settled. Further to determine who is to be chosen, we may go back for a moment to the "Who's Who" method.

Dr. Cyril Burke, the English psychologist, devised a problem (described by Mr. Wiggam in his review of the Terman volume already referred to) which he put before various classes of school children. Slum children required an average of 123 seconds to arrive at a solution, while merchants' children took but 91, and "the children of professors and bishops" (presumably Anglican bishops) only 74. Nor do I wish to conceal the fact that "in the general run of people there is one eminent man out of every four thousand," while "among the sons of English judges there is one eminent man out of every eight." Ought we not to import some germ plasm from the British Bench? Anyway, all of the famous biologists and psychologists and sociologists upon whose findings the Wiggam arguments are based, took their successful men either from "Who's Who," from some dictionary of biography, or measured it frankly in dollars and cents.

It might be suggested that not all desirable human traits are those which lead to wealth or conspicuous position. No Lives of the Saints are consulted to show the effect of poverty and self-denial upon the growth of holiness—holiness, presumably, not being hereditary, perhaps not even eugenic. Prof. Terman does say that nearly all gifted children come from good homes. But what is a

good home? One which tends to produce Christians, or Mohammedans, or Methodists, or Christian Scientists, or Poets, or Plastic Dancers?

Anyway, under democracy, according to Mr. Wiggam, the poor are being bled white and ever whiter through the opportunity given to the best of them to mount the ladder to something better still, leaving the residua to their poverty and shame. "Nothing on earth," he says in the course of the *World's Work* articles, "would improve the condition of the poor as much or so permanently as decreasing their numbers. . . . Just in so far as democracy works successfully in giving the masses opportunity, it defeats its own end, biologically. . . . Democracy and liberalism will fail and plunge men back into a social and intellectual Dark Ages unless they have the will and vision to provide a constant and adequate eugenical remedy for the biological disaster brought about by their own success."

And in "The New Decalogue" (G. Stanley Hall says "one lays it down with the feeling that biology is the basis of a new decalogue as important and as authentic as the old one."): "Your wise men are searching for a cure for tuberculosis, insanity, etc. . . . Should they find such a panacea . . . every biologist would apply it without a moment's hesitation. But if you apply that panacea and do nothing else you will wreck the very race you have saved." [11]

What else must we do, then? It appears that we must first make the environment hard, so as to kill off the unfit, and then make it easy for the survivors. Do you get the point? And it is going to be made selectively difficult for those not approved of by the Eugenics Society. An

[11] "The New Decalogue of Science," p. 68.

easy environment is safe only for those who have passed their examinations.[12]

Mr. Wiggam is planning for an army in which all are generals. Poverty, inconspicuousness, slummishness, are relative terms. No sooner have you eliminated one grade than you are logically bound to eliminate another. There will remain no hewers of wood and drawers of water—as if the world could exist for a day deprived of these blessed and humble "failures." But in the eugenic utopia no more shall it be said, "if one cannot paint, one must grind the colors." All must paint, or become as the barren fig-tree.

But if the poor are to be eliminated, why not the recalcitrant? Why not those, who, in the old phrase of Grover Cleveland, show "offensive partisanship"—for some cause not approved of by the ruling party? Granted the principle, why should Protestants tolerate Catholics? Or Baptists Presbyterians? Or Old-School Baptists New-School Baptists? Why, even, should Professor Terman and Mr. Wiggam tolerate J. B. Eggen, who has written, "The long-standing problem of heredity versus environment has been solved in favor of environment?" Or, for that matter, Professor Terman Mr. Wiggam himself? If we are to have uniformity of this sort, let us have it. Let there be a driving from life's stage of those who would presume to raise any chickens but Plymouth Rocks, and may the devil take the hindmost.

Personally, I have nothing to fear. I am myself descended from our early English settlers—though, as I watch the antics of some of my remote cousins, I sometimes am anything but proud of the fact. Nor do I like

[12] See "A parable of Wheat and Men," "The Next Age of Man," p. 21.

to think that my blood shall flow down through the generations by any "privilege" granted by Mr. Wiggam and his ilk.

He speaks of sanity as a test for survival, and then speaks of "the kind of peace that came to Nietzsche, bravest soul since Jesus." [13] Does he not know that the only peace that ever came to Nietzsche was the peace of final mental decay? And what does he mean when he dares to exclaim: [14] "Oh, for a Socrates, a Seneca, a Pasteur, a Huxley, a Nietzsche, a Jesus in every nursery and schoolroom?" A Nietzsche and a Jesus! Has Mr. Wiggam never heard of that scourge of small cords which was once used upon the backs of those who sought to make of the Father's house a den of thieves?

[13] "New Decalogue of Science," p. 253.
[14] *Ibid.*, p. 278.

CHAPTER VII

THIS UNBELIEVING WORLD

I. DORSEY

WE have now to consider some of our minor misbehaviorists, and may as well begin with George A. Dorsey, Ph.D., former Professor of Anthropology at the University of Chicago, and author of "Why We Behave Like Human Beings."

I would hate to be asked to analyze this book or to reduce its contents to an understandable outline. No matter what philosophy I attributed to it, I could be flatly contradicted by quotations from the book itself. Thus in one place he says, "Biologically, rape and the theft of a loaf of bread are natural behavior; celibacy and asceticism are crimes against nature." And in another place he describes the courtship habits of various mammalia, showing that rape at least is by no means biologically natural even among the lower animals. The author is an eclectic, wandering freely through the pages of Darwin, Bergson, Dr. Watson and many others, picking and choosing what for the moment pleases his fancy, untroubled by the clashing of the various views which his staccato style records.

Dorsey, though he says nothing new, constructs a curious puzzle of inconsistencies, but Dr. Watson, I think, is the key. He even says that Dr. Watson read the last two chapters prior to their publication, which sounds like a

claim that the great behaviorist approved of them. It would seem that he did not read them very carefully. Nevertheless, though marked by the bar-sinister, "Why We Behave Like Human Beings" is clearly a Watsonian child.

It begins, as do so many of our "thoughtful" books, with anatomy, physiology, biology, a long history of the lower forms of life, of the protozoa and the amœba and their kin, of the physical details of the human body, in embryo and out of it. The public thirst for facts of this sort is too great not to be taken advantage of by all who have psychological or philosophical axes to grind.

And having posed his facts, and duly mixed them with alleged facts, he proceeds in the time-honored manner to attribute to his own inferences the authority due only to the facts themselves. He also makes large use of the custom of speaking of alleged "mechanisms" in metaphorical terms, personifying them and thus making them "go" with an energy which they are not supposed to possess. Thus he lends a vividness as of life to what is in reality a picture of death. And having denied God in substance, he does not forget now and then to fling Him a kind word.

Man, we have been told, cannot by taking thought add a single cubit to his stature. Other creatures seem to be more fortunate, for we learn on page 66 that "some Primates experimented in fingers." And on this same page "a lemur lost his second finger." No, he did not advertise. He lost it on purpose, the way Freud lost the book his wife gave him when he was vexed at her. But in this case the object was to "give the thumb more grasping space." And "some tried claws instead of nails."

Thus are evolutionary processes given aims and wills of their own. As a mode of literary expression it would, of course, be proper enough did it not serve to smuggle

into the argument a multitude of those vital things which the makers of such arguments are forever pretending to exclude. Could primates really "experiment" with their fingers the way a Curie can experiment with pitchblend, choosing, rejecting, moulding the very substance of themselves in accordance with some "purpose," Darwin need not have troubled himself trying to discover how species originated. We would all know.

What Dorsey really feels behind his smoke-screen of rhetoric can be seen on page XIII of his Preface, where he says:

"As philosophy was moonshine before it began to investigate the elementary properties of matter and energy, so, I suspect, religion will be subject to quackery and hypocrisy until humanity itself becomes more human than human nature and religion itself ceases worrying about heaven and hell and devotes its energies to making this earth a paradise."

That is, when religion ceases to deal with the supernatural it will cease to be subject to quackery and hypocrisy. Very likely. It would be difficult for either hypocrisy or quackery to attach itself to anything which had ceased to exist. How, then, is this earthly paradise to be brought about? Dorsey does not tell us in so many words. But he says that we may soon hope for the discovery of a method whereby the several hundred ova of the human female may be removed and fertilized outside of the body.

This method is already employed with fish in the modern hatchery. Its advantages are obvious. In the first place, we could almost do away with the necessity of raising males, or at least could let the surgeon see to it that few of them remained males. This would solve a great many social problems and release a lot of energy for industrial em-

ployment. As it is, millions of spermatozoa go to waste in every man. Also, the females, having furnished the ova, would no longer be females in any troublesome sense of the word. More saving. Nor should it be difficult to induce the Eugenics Society to superintend the whole business. Of course some will object that this is not a picture of a terrestrial paradise, that it looks more like some particularly repulsive corner of Hell which Dante forgot or forbore to describe. But such malcontents can be dealt with by removing their germ-plasm from the stream of our national life and refusing it a place in the government hatcheries. Progress of this sort need not be suffered to halt on account of the existence of a few persons not socially minded.

But how about philosophy? It was moonshine until it began to investigate the elementary properties of matter and energy, and elementary properties are ultimate properties. And religion will be subject to quackery and hypocrisy until it ceases worrying about ultimate properties and busies itself with making earth a paradise. So moonshine mixed with quackery and hypocrisy is the substance of those movements having other than a narrow, earthly aim. No coins are liable to be counterfeited save those which are honored at some bank outside of our humdrum sphere. And as science is supposed to be matter of fact and practical, quack scientists become unthinkable.

When, however, was it that philosophy left off being moonshine? It must have been some time ago, for even the ancient Greeks—to say nothing of the Hindus and Chinese —were eager to investigate the elementary properties of matter and energy. As they were in the habit of keeping their science a secret from the common man, we do not know how much science they had. But it is evident from

their philosophy that they were always thinking about matter and energy. Their conclusions may sound quaint—though not quite so quaint today as a half-century ago—but it is certain that moonshine was largely mixed with observation until modern metaphysics, predominantly German, took the field. I cannot stop to prove this, but I refer Mr. Dorsey to any Story of Philosophy, even Will Durant's. I also recommend that he read some good history of science, for he says on page 86: "Science knows nothing of the ultimate origin of the source of energy; it only accepts both facts [what facts?] and goes on with its business of trying to find out what matter is and what energy can do. In other words, the problem of the origin of life is locked up in the origin of matter and of energy."

One often hears this allegation—that science goes on with its own business, leaving the problem of ultimate origin aside. Yet every major hypothesis which science has ever constructed is an attempt to account for this very ultimate origin—or primal origin, if you prefer. It could not be otherwise. How could science try "to find out what matter is" without at the same time trying to find out how matter originated? Neither matter nor energy is a fact, isolated and handed out on a plate for human use. Science must needs attempt to discover the nature of that with which it works. And the only way to explain a fact, let alone acquiring the power of producing phenomena at will, is by discovering a preceding or accompanying fact.

If we find the dead body of a man in the kitchen, and then find a knife sticking into his heart, the knife helps to explain the dead body. A bloody finger-print of the cook's thumb helps further. If we then learn that the dead man had been the cook's lover and that he had been flirting with the second-parlor maid, we have taken another step. But

if we want to know how to prevent such incidents (or to bring them about, if that be our aim) we must go on and learn "Why We Behave Like Human Beings." The very title of Mr. Dorsey's book shows it to be a search for the ultimate. Does he wish us to understand that it is therefore unscientific moonshine?

But let him proceed with his personifications. "Nature," he says,[1] "can mean anything." Whether he is referring to the word "nature" or to the sum of things commonly called "nature" I do not know. When we were talking of primates, the thing nature appeared to mean a great deal, since it could experiment with fingers and weigh nails in the balance against claws. Or was the primate an independent experimenter, and not a part of nature? Dorsey goes on by speaking of a certain development as being "an amazing tribute to the persistence of nature," and of a time when "nature" began to branch out on "new lines." Clearly nature here is something with will, force and purpose.

He writes also of "the vertebrate idea," as if it were an idea possessed by some backbone—in the days, too, when the only backbone in the world was a thread-like notochord, such as that of the amphioxus. So the idea was originally the notochord's!

But through all this verbal debris something seems to shine like a skeleton through the dark, which it is not difficult to recognize as the *élan vital* of Bergson—that God which nothing developed out of nothing, which *inheres* in things of an origin as tenuous as its own and is determined to go somewhere but is by no means certain where —nor can the imagination of man picture how.

The motion pictures have accustomed us to demand a

[1] *Op. cit.*, p. 83.

continuous stream of action, of facts or of what look like facts. Nothing but motion seems any longer to interest us. Probably we have fallen into the habit of ignoring all comment which may be made upon it. The danger is that the comment nevertheless may impress us, reaching our minds when our intelligence is off its guard, so that we end by mistaking comment for something else. We remember that we came upon it in company with facts; and are not conclusions, like men, to be judged by the company they keep?

Unfortunately, facts cannot choose their company, and may be mustered in to screen the nakedness of any theory whatsoever. To discover the *non-sequitur,* the disharmony between the facts and their evil companions, requires mental effort—and against mental effort, also, the movie has somewhat prejudiced us.

However, it does not require much mental effort to sift fact from fancy in Dorsey. "The drive for a mate," he assures us,[2] "is backed by a sensori-motor mechanism which functions till the mate is secured." But everybody knows that the mechanism in question does not continue to function until a mate is secured; lacking a mate (to say nothing of the possibility of sublimation), its force will eventually be drained away through other channels. He himself admits this a few lines later on. But first he must say (on this same page) that "the mate-impulse is driven by an unconscious mechanism, and not by any desire of offspring."

Let it be granted that sex will function without desire of offspring—even in the face of a deadly dread of offspring. If it were not so, contraceptive methods would hardly have been invented to sterilize the sexual act. But

[2] *Ibid.,* p. 429.

how about this precious "mechanism" being unconscious? Does he mean that the mechanism itself is unconscious? Or that it acts without our being conscious of it? He leaves us in the dark, and we are driven to seek such light as our own experience may supply. And why does he leave us in the dark? Because, regarding *us* as mechanisms, he sees no difference between unconsciousness in ourselves and unconsciousness in the sex-glands and their accompanying organs!

So he leaves us with the biologically natural raper who is unconscious of his rapacity, or whose body is ignorant of its biological naturalness. We may take our choice of interpretations. To say that the knife is ignorant of the murder committed with it, and to say that the murderer is ignorant of the murder he commits with the knife, is therefore saying one and the same thing. Both knife and murderer are mechanisms. And so, it is to be hoped, is the murdered one. Unconsciousness on his part would certainly help murder to fall unnoticed into the procession of the biologically natural.

And now we turn to page 434 and learn that "as one calls the roll of the men who have rendered useful social service, one is impressed by the notion that most of them have succeeded not because but in spite of their training." Here is the behaviorist, who calls in Dr. Watson to read his manuscript, delivering us suddenly hand and foot over to the hereditarians, to the eugenists—whom on other pages he professes to abhor. For it is utterly impossible to suppose that Dorsey means that the great succeed in spite of all circumstances through exercise of individual will inherited from nobody, and all their own.

Then, two pages further on, we come to the eternal question of woman's sphere. "Freedom of movement is

soon limited for girls. Some learn to skip the rope and play jackstones only under parental frowns. . . . And as for climbing trees, playing marbles, going off swimming, who ever heard of such a thing!"

I turn at once to the date line at the end of the preface, and learn with astonishment that it reads, "New York City, June 1, 1925." So New York parents are frowning—at least some of them are—when their girls skip the rope or play jackstones. Or were in 1925. What changes must recently have taken place, or how the newspapers of the world must have lied about New York! But anyway, this looks like a whole-souled endorsement of the more modern way of bringing up girls and a condemnation of the ultra-conservatism of New York—unless Dorsey was thinking of the girls of Thibet and forgot to mention it.

He is still modern on page 439, where he says: "It is psychologically significant that children of both sexes are born with erogenous zones. . . . The sex-mechanism is inherently perfect at birth. The [interior] impulse for a mate appears later, at puberty. But the mechanism itself is so built into our structure that inaction is biologically abnormal. Yet we speak of 'control'; and dose youth with endless formulæ."

Let us, then, cease to speak of control—at least long enough to enquire into the meaning of these Dorsey adjectives. Here we have "psychologically" significant, and "biologically" abnormal, with the adverb "inherently" attached to the word perfect. (I also note, on page 103, that, "biologically," immortality is a figure of speech.)

Does he mean that the erogenous zones are insignificant when viewed, say, from a social rather than a psychological standpoint? Does he mean to admit that their inaction is normal if we could once get away from whatever

is implied by this ubiquitous biology of his? And who is to guess what is meant by a perfection which inheres in anything at birth?

To inhere, I believe, means to be fixed or to exist in something else; to be an essential part of; to be innate. At least my dictionary says it does. Now what is a perfection which inheres in a just-born erogenous zone? Does it mean that the zone is born ready to perform all its functions? But this is contrary to notorious fact. Or is the zone born imperfect, and permitted to use its inherent perfection only later? But we have just been told that inaction is biologically abnormal. If any meaning is to be supposed to inhere in words, Dorsey must here be trying to tell us that between the time of birth and the time of puberty, the erogenous zones should not be subjected to the biologically abnormal condition of inactivity.

And yet, on this same page, he continues: "What happens to the sex-response mechanism between birth and marriageable age? Biologically nothing; nothing is expected of it." That is to say, biologically speaking, nothing is expected of the erogenous zones before puberty except that they shall endure the biologically abnormal condition of inaction. But perhaps "biologically nothing" means just nothing, and perhaps just nothing is the meaning of the whole passage. Let us hope so.

"Raise the standard of man's morality!" he next admonishes us—we are now at pages 443 and 444. "But not by talk. Work will do it. Many a boy is so hard at work he has no further energy left. His sex-impulse is expended in life impulse activities." Admirable! This is evidently biologically abnormal and in complete contradiction with what has gone before, but it is nevertheless good sense and capital ethics.

"Girls begin to find outlets for their energy in action, in sports and games, and in the broader affairs of life interests." Admirable again. But what has become of the frowns of their jackstone-hating parents? And the next line reads: "All-night dances can dissipate a lot of energy for both sexes." Readers who doubt the existence of this line are referred to the book, page 444. The all-night dance has at last found its place among the means recommended for curbing sexual precocity.

We skip a dozen pages, and read: "Until recently it was a woman-made world we lived in. The wife-mother was the center of the home." This is refreshing. We have heard it so often said that until recently, when universal suffrage came to the rescue, this was a man-made world. Dorsey lays the blame on women, which is at least a change. But how came woman to make the world when it was the home and not the world which she was the center of? Be that as it may, "it was her interest to make [the home] a real center. It became a hive of industry and a swarm of children." It certainly did. And we are back boosting the good old times again. Nor are they quite over yet, for "women generally married for love, as they do now if their mate-hunger is unimpaired."

That flicker of partiality for sports and games for girls seems to have died out. Dorsey returns to conservatism. And the argument proceeds: "Now women have their 'rights.' In obtaining 'rights' she abdicated a throne: she no longer rules by divine right. The children that 'bless the home' are turned over to the nurse while mother presides at bridge. . . . All this, of course makes for 'progress.' But in our social progress we have acquired special schools where boys may learn to be pimps and girls to be prostitutes."

This seems to me a little severe. But at least we are sure of Dorsey now. Girls used to be restrained, and he favors restraint. "Social conditions are changing, but the average American girl still approaches her majority fitted for no economically independent career. Brought up as a social parasite, it is her belief and the all-around understanding that marriage is her career."

What does this mean? That marriage was a girl's career was the all-around understanding in the days when the wife-mother was the center of a home that was a hive of industry and a swarm of children. And now we are asked to believe that girls still brought up with such ideas are social parasites. Was woman a parasite when she occupied the throne which some now have abdicated? This argument has gone insane. Girls must be brought up as social parasites or sent to schools for prostitutes. Are we in a woman-made world now, or in a man-made world? I confess that I do not know where we are. But I read on: "Many a mother nearly 'dies of shame' when Mamie bobs her hair and marches off in the garb of a girl scout. 'Girls didn't do such outlandish things in my day!' They did not." The jackstone-hating mother thus comes once more to the fore, and she believes that her girls are going to the devil in boy scout's clothes with bobbed hair to the old swimming-hole. I hope those schools for prostitutes are not hard by.

The girls, too, come in for their meed of shame. For after saying harsh things of Freud, Dorsey first writes, "It is natural for the boy to pattern his reactions towards his mother after his father; for the girl to prefer her father,"—which seems to have been taken from The Complete Freudian—and then clenches the matter by adding: "These innocent tendencies may be shamed into permanent

attachments, making it difficult for the boy or girl later to make perfect substitutions."

Did Dr. Watson really read this chapter (it is the last in the book) and pass without remark the statement that a seeking-motion reflex like the foregoing may have a substituted stimulus built into it by *shame?* Or do he and Dorsey consider shame a pleasant emotion? No; we are here plainly in the presence of mother and father fixations, of the Œdipus complex—an innocent thing made dangerous and eternal by being driven into the unconscious mind by shame. And Dorsey believes in no unconscious mind, or in any other sort of mind. Usually he encloses the hateful word in quotation marks. But he says (on page 11), "We do not use the brains we have." Is that the solution?

These are deep waters, so let us get back to our girl scouts. "For we have to learn anew what our stone-ax ancestors knew. Girls can be as 'outlandish' as boys! The girls themselves are just beginning to discover it." Are they? Bless their hearts! Everybody else has always known it. What follows, however, is news. "Marriage behavior is in for further conditioning. The sex-complex may become simple again." [8]

Dorsey's attitude towards the woman question at last becomes clear. It is a return to the stone-age to which he hopefully looks forward—the stone age and the simple, unconditioned reflex of the erogenous zone stimulated by exterior contacts, with no inner-born, nonsensical, complex sentiments to render it biologically abnormal. We have finally re-established harmonious relations with the gut-reactions so much admired by Dr. Watson.

Dorsey says that he does not see how the Darwinian

[8] *Op. cit.*, p. 446.

theory of evolution by means of the accumulation of minor variations through natural selection can have worked unless the theory of the inheritance of acquired characters be taken for a fact. Nevertheless he informs us [4] that "our ancestral primate was a small, warm-blooded, primitive mammal with forty-four teeth, four short legs, all alike, and feet with five toes armed with claws." This forbear "lived on insects, fruit and nuts. Who was *its* ancestor? Where did it get its mammæ?" he then asks. And he answers himself: "Circumstantial evidence points to a dog-toothed, low-browed, Tirassic reptile, called Cynodont."

No, Dorsey has not become a convert to the theory of the inheritance of acquired characters. He does not much believe in heredity. Upon undivulged circumstantial evidence, however, he settles the moot question of human descent. And he calls his book a bit of "propaganda for *critical* judgments."

He settles also the problem of will.

"As for will, it is as free as air. And much more difficult to catch." [5] The meaning here is itself a little difficult to catch. Nor is the following quite clear: "Our psychology is human, but our behavior is individual." When did our psychology become human? It is welcome news. Our behavior has always been individual, of course. But Dorsey, as a behaviorist, should have said that it was the collectivity of our reaction-mass—which certainly cannot be either free, individual or human unless it is controlled by some psychic power.

"Psychic power?" Dorsey exclaims. "I know what

[4] *Op. cit.*, page 71.
[5] *Ibid.*, p. 454.

Dr. George A. Dorsey

"We do not use the brains we have"

power is; I know what psyche is; I also know that knowledge may be power. But I can discover only one way to get knowledge into my head: through my sense perceptions. And only one way to get any power out of that knowledge: by inference, by reason. . . . When I want magic I go see Houdini."

Good! But why, if reason can turn knowledge into power, go to Houdini for magic? Turning knowledge into power is real magic, glorious, white and true. It happens every day. Even Dorsey can lead us to the eternal verities, it seems. But he will not permit us long to remain even in their neighborhood. "We learn to think logically," he declares, "just as we learn to speak correctly or to behave decently. I may think well, I may shave well . . . who shall say? My way of thinking and my way of shaving are my own ways . . . I may change both tomorrow; someone is always inventing new ways of adjustment, new ways of exciting human protoplasm to change its shaving soap. New thought also. Why not? We have new books, new scandals, new elements, new diseases, new razors, new glands, new logic." [6]

"The point is that there is no thought without muscular or glandular activity. This is true whether the stomach thinks hunger, the dreamer thinks air-castles, the prisoner thinks freedom, or the maiden thinks of her lover. Thinking is a bodily act as coughing or scratching one's head. During thinking energy is consumed, mechanism is involved." [7]

Do you comprehend? The man who scratches his head has always been supposed to be thinking. Now we know

[6] *Ibid.*, p. 155.
[7] *Ibid.*, p. 456.

that the scratching is the thinking—thinking is a bodily act. The rumbling of the bowels is thinking. The stomach thinks. Everything thinks but ourselves.

No wonder we have new thoughts when so many new thinkers come forward. New logic. My stomach may think that the sum of the interior angles of a triangle is equal to twenty-three right angles, or that a bite of mince pie is bigger than the whole pie. It is *my* stomach. What it thinks is nobody's business. And by tomorrow my stomach's protoplasm may become so excited that it will think some other way.

I can see how we have new scandals at the same time that we have new books. But I don't see how we are going to get back merely to the stone age by our new ways of thinking. They will certainly take us back much further than that. And I wonder what our physicians will say to the suggestion that our glands are new? They have been offered to us as new discoveries, but this Dorsey seems to hint that they may be new inventions. I "think" we might better have gone to see Houdini after all. For "rational conduct is a dream" on page 470, and on page 455 it is the only way of converting knowledge into power. Over this mystery I scratch my head in vain.

Then there is the Church.

"As a projector of unsocial behavior," says Dorsey, "the so-called Christian Church, with its endless squabbles over forms, creeds and rituals, and its eternal betrayal of humanity, is not far behind." [8] Not far behind what? Good form. For "good form is in the saddle; it is ruthless, it is mighty, and it does prevail. It is not founded on intelligence."

I am glad that the Church has at least good form to

[8] *Op. cit.*, p. 437.

keep it company. But I confess that I do not know what church is the "so-called Christian" one; whether it is Protestant or Catholic; nor what the real, honest-to-goodness Christian Church, if any, calls itself in Dorsey's mind.

"Socially useful behavior is not more prevalent, because sociably fashionable behavior has a better lobby." [9] Our Dorsey is now turning radical, for he goes on: "By Fashion I do not mean the, or a Four Hundred; I mean those in power of money and of government, our bosses; the people who are trying to make us buy their wares, join their club, vote their ticket, think their thoughts, and help them kill or cripple their enemies." Radical and pacifist. But I had not heard that force was being used by anybody to make people join their clubs.

"What," the now thoroughly aroused former professor of anthropology demands—page 473—"can be of less consequence to you than whether I *believe* in this or that kind of a God, Savior, government or society? What is of consequence to you, to society, and to me, is what I do."

Very true, Mr. Dorsey. And I for one apologize. But we were under the impression—seemingly mistaken—that your beliefs might, at times, influence your conduct, or even enable us to guess what, under given circumstances, you were likely to do before you actually did it and it was too late.

I hope I have not given the impression that Dorsey is unimportant. He—like the one who is to follow—is immensely important. He has a large and enthusiastic public. I have never seen the rationality of his argument seriously questioned in any periodical of general circulation. And that fact, perhaps, is the most important one of all.

[9] *Ibid.*, p. 473.

2. THE BRAZEN BOUGH

Lewis Browne's "This Believing World," which ran through four large printings within the first four months of its existence, is an interesting example of the sort of reasoning that passes with a generation devoted to materialism, mechanism, humanism, monism and the newer psychologies, and yet is not quite ready to pay the consequences of its position or to abandon altogether the banner of the cause which it has deserted.

Browne is what may be termed an "admirer" of Jesus Christ. He treats him always with the utmost kindness, speaking of him [1] as "a gentle, loving, helpless youth . . . the very incarnation of perfection,"—a perfection with which an "insistent pacifism" is soon included. "The spirit of Jesus," it also appears, "was innately Jewish and puritanical." [2] Moreover, "Jesus, one must remember . . . like every other great Jewish prophet . . . preached only ethics." [3]

Thus the great fame of the Nazarene, which rests upon the idea not that He was the incarnation of perfection but the Incarnation of God, is sought to be preserved and appropriated by an eclectic modernism which denies the very basis of His title to supreme distinction. Robert Ingersoll and Thomas Paine are thought to have been a little crude in some of their anti-religious tirades. But they addressed a people that was at least familiar with its Bible. They never presupposed such childish ignorance of history and scripture as is everywhere taken for granted in "This Believing World."

[1] "This Believing World," p. 298.
[2] *Ibid.* p. 296.
[3] *Ibid.*, p. 297.

Browne, who naturally has small use for the Church of Rome, is sympathetic towards such leaders of the Reformation as Wycliffe, Huss, Luther, Zwingli and Calvin. But not even Protestantism wins his unqualified approval. He says [4] that "Protestantism includes every type of religious thought," and "only slowly, and with many pangs" is "shaking off the religion about Christ. Only slowly, very slowly, is it beating its way back to the religion of Jesus."

This seems like a fairly clear thesis, uttered by one who has never read either the New Testament or the Old, and who consequently is able to look upon Christianity, or "the religion of Jesus" (i.e., the religion which he thinks was taught by Jesus), as an excellent system of human morality of which he has heard good report, and holds that it should not be confused with supernaturalism, or "the religion about Christ," of which he has heard bad and understands has been invented somehow without historical warrant.

Were this all, I might pass him unmentioned. One cannot stop to complain of every popular author who speaks without information. But the total depravity of the Browne method of thinking, of argument, of logic—to employ such words in his connection; the illimitable naïveté with which he propounds mutually exclusive and antagonistic assumptions in that agreeable and easy-flowing style of his, positively cries out for remark. How he "gets by with it," is more than I can understand. "This Believing World" is logical only in two particulars. It follows the same author's short history of the Jews, entitled, "Stranger than Fiction"; and it is dedicated to H. G. Wells. Such substance as it has marks it as a

[4] *Op. cit.*, p. 300.

less aureate branch sprung from Fraser's "The Golden Bough."

"In the beginning," it begins, after certain preliminaries —we are now in fact on page 27,—"In the beginning was fear; and fear was in the heart of man. . . . Boulders toppled and broke his bones; diseases ate his flesh; death seemed ever ready to lay him low. And he, poor gibbering half-ape nursing his wound in some draughty cave, could only tremble."

Is it necessary to remark that there is no evidence whatever pointing to this as the early state of man? That it is merely an assumption assumed to help along one particular theory of evolution, and is contradicted by those modern researches tending to show that savages, when actually degraded, are degenerate rather than primitive? Yet Browne illustrates his text with an original pen-and-ink sketch of this Missing Link. The drawing is extremely good and spirited. One only wishes it were a photograph. And he continues: "Since blows could not subdue the hostile rocks or streams [the rocks were hostile, evidently, because they supplied caves, and the streams because they supplied fish], our ancestor tried to subdue them with magic. . . . Self-preservation must have forced them to [the] certainty [that spells would work], for without it self-preservation would have been impossible. Man had to have faith in himself or die—and he would not die. So he had faith [in himself, you will note] and developed religion." [5]

This is so vivid that it sounds like the description of an eye-witness. And he goes on in a no less certain tone: "By the word faith we mean that indispensable—and

[5] *Op. cit.*, pp. 29.

therefore imperishable—illusion in the heart of man that, though he may seem a mere worm on the earth, he nevertheless can make himself the lord of the universe. By the word religion, however, we mean one special technique by which man seeks to realize that illusion. It was by no means the first such technique to be invented by man; and it may not be the last, either. Long before man thought of religion, he tried to control the 'powers' of the universe by [this] magic." [6]

Very well. Man, once half ape, has become, in seeming at least, a mere worm; but he entertains an indispensable and "therefore" imperishable illusion that he can make himself lord of the universe—certainly a strange conviction for either a worm or an ape to entertain. To support this illusion, he first invents magic, which is an attempt to coerce the "powers," and then invents religion—which Browne later explains as an attempt to "cajole" the powers. Religion and magic are merely two different kinds of technic, each designed to fool the technician until by dint of fooling illusion becomes reality. The "powers" are not fooled because they are always enclosed in quotation marks, which I understand to indicate that they do not exist. What next?

"He ["dawn man"] saw on every side of him the fell and bewildering 'powers,' and illogically but naturally his first concern was not how they worked but how they could be avoided." [7]

We thus make our acquaintance with the Browne idea of "logic." A logical dawn man would have waited to be devoured by the fell powers, imaginary or not, before try-

[6] *Ibid.*, pp. 29–30.
[7] *Ibid.*, p. 30.

ing to avoid them. Logic would have compelled him to understand before doing anything else. Fortunately for us, dawn man was illogical. He escaped extinction.

And so we read on, up to the beginning of the fifty-ninth page, becoming better and better acquainted with our ancestor all the while. The conviction grows that Browne was there. Then, suddenly, he tells us that, though he is aware that his narrative has made it seem "as though the writer knew for certain just what had happened . . . actually he knows nothing of the sort. All he knows is what many learned anthropologists after much painstaking research, have *surmised.*" The italics are his own. "Of course," thus begins page 60, "they may have surmised quite badly. Their underlying theory may be entirely wrong, and religion, instead of having been originally created to elude or conquer fear, may have arisen quite independently of it. Religion may be an altogether primal instinct in the human race—something just as old and fundamental and innate as fear itself. Who knows?"

As candor, this is flawless. But it is disturbing. If learned anthropologists, after much painstaking research, can be entirely wrong (and indeed a great many other learned anthropologists, after equally painstaking research, have time and time again declared these particular learned anthropologists to be wrong altogether) why cannot the learned anthropologists and biologists who furnished the data for the spirited pen-and-ink sketch of our gibbering, half-ape *aïeul* be wrong as well? What if this surmising about monkeys and worms be as badly done as may be this surmising about religion? And what is the use of going on with all this if it be just a guess?

Shall we continue because it is stranger than fiction? But it is not in itself as interesting as is fiction. We were

lured into reading by the idea that it was being presented as truth. And now we are haunted by the fear that it may be a blasphemous invention—that religion rather than this anthropology may have some truth in it.

So we skip "What Happened in India," "What Happened in China," "What Happened in Persia," and "What Happened in Israel," since, after all, it may never have happened; and turn to part seven, "What Happened in Europe." Here, as near home as this, we ought to be on safe ground, with dependable historians instead of surmising anthropologists to act as guides. This is the portion of the book which deals with the Christian religion, in itself of more interest to most than are the Shebatum taboos, Taoism, or the heliotropisms of Zoroaster. What, then, did happen in Europe in the days when Christianity was born?

"The prologue of the story of that new religion opens in Galilee. Almost two thousand years ago there was born in the Galilean village of Nazareth, a Jewish child to whom was given the name of Joshua, or Jesus. We do not know for certain how the early years of this child [Browne adheres to the lower cases in all emergencies] were spent. The Gospels recount many legends concerning his conception, birth, and youth, but they are no more to be relied upon than the suspiciously similar legends told many centuries earlier about Zoroaster." [8]

The anthropologists were only possibly wrong; but the Gospels recount legends, and Browne here does not say maybe. Neither does he say where he gets his information concerning the birthplace of Christ. Had he ever read even the first Gospel he would have learned that Christ was born in Bethlehem of Judæa. Perhaps our author referred

[8] *Op. cit.*, p. 259.

himself only to his own stranger-than-fiction history of the Jews.

Anyway, he goes on to declare that this Child "cherished many of the primitive notions of the simple folk to whom he belonged, believing that disease and sometimes even death were caused by the presence of foul demons, and could be removed by prayer. He knew little if any Greek, and could never have even heard of Greek science or philosophy. All he knew was the Bible, and probably the text of that had been taught him only by rote. . . . Above all he must have been taught to prize as dearer than life the old obsession of his people that someday they would be miraculously freed by the Messiah. Indeed, so well was that last drilled into him that, as he matured, the hunger for the realization of the hope became his all consuming passion." [9]

We now have One "who preached only ethics," and yet cherished an all-consuming passion for the realization of the obsessive hope of His people that someday they would be miraculously freed by a Messiah.

If Browne will turn to another book with which he seems to be as unfamiliar as he is with the Bible, the dictionary, to wit, he will find ethics defined in some such manner as follows: "Ethics, the science that treats of the principles of human morality and duty; moral philosophy; morals." An obsessive belief in miracles is something quite beyond ethics, either of a puritanically Jewish or any other variety. Nor do the cherished primitive notions of simple folk to the effect that diseases may be cured by prayer savor much of ethics. I do not of course mean that Christ

[9] *Op. cit.*, pp. 259–260.

had no ethics; but Browne has introduced Him to us as one who preached ethics only. Did He, then, keep his one "all consuming passion" out of his preaching?

This attempt to distinguish between "the religion *of* Jesus" and the "religion *about* Jesus," is as old as modern ignorance of the subject. But Browne, given all the ignorrance in the world, seems unable to state it without letting it sting itself to death with its own tail. And he goes on, still further to murder the dead body of his own philosophy: "Now . . . there was in the land an evangelist . . . called John the Baptizer. . . . Jesus was for a time a follower of John, one of a multitude of young Jews and Jewesses who believed in the mission of the wild prophet. His gospel was much like that of his teacher. 'The time is fulfilled,' he cried, 'and the Kingdom of God is at hand.' " [10] That is, the new gospel was the messianic gospel of a wild prophet—and the "follower" who preached it preached only ethics!

And—"when the stories of that young preacher's wandering [the reference is to Christ, not to John] were gathered together in later years and set down in writing, it was said that he performed all manner of miracles as he went about the land. Perhaps there is a fragment of truth in that tradition, for if people will only believe with sufficient faith, miracles become not at all impossible. . . . And Jesus could quite command implicit faith. He himself believed; with all his heart and soul he believed that soon would come the Great Release. . . . He spoke without the slightest flourish, using plain words and homely parables. He indulged in no philosophy or theology, for,

[10] *Ibid.*, p. 261.

after all, he was an untutored toiler who knew nothing of such vanities. Nor, seemingly, did he preach any inordinate heresies." [11]

How does Browne know how He spoke? Surely he cannot be depending upon the "stories of that young preacher's wanderings" that were "gathered together in later years and set down in writing," for he has already told us that "they are no more to be relied on than the suspiciously similar legends told many centuries earlier about Zoroaster." Again it seems to be suggested that Browne was there.

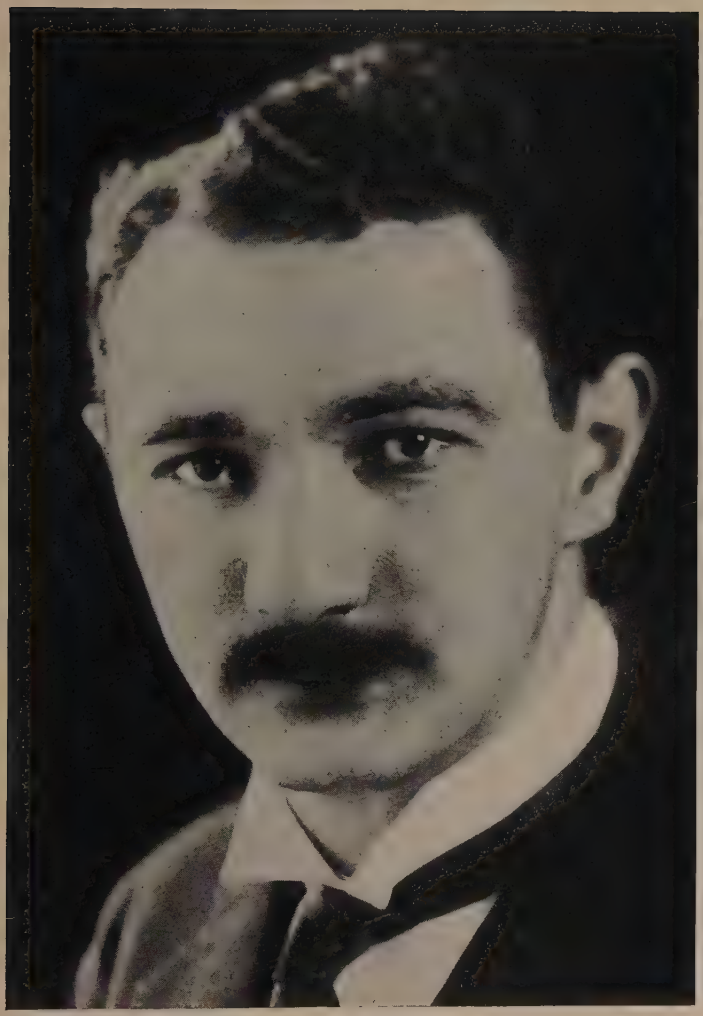
But this at least seems clear: Browne holds that Jesus preached "The Kingdom of God is at hand"; that it is not at all impossible that He performed miracles, though only of the faith-cure sort (I have insufficient space for the discussion of miracles as distinguished from faith-cures); and that He did not preach "any inordinate heresies" from the Jewish standpoint. "He was not a heretic in the sense that Ikhanaton or Zoroaster were heretics. Outwardly he was distinctly a conforming Jew." [12]

"Yet [on the same page] for all his conformity . . . Jesus was definitely a rebel. . . . His whole gospel was intended but to comfort the disinherited, for it declared that no matter how unlettered they might be they could nevertheless be taken into the Kingdom of God when it came. . . . Now such a gospel was literally saturated with heresy."

Saturated with heresy, but not with inordinate heresy —is that it?

"Because it [Christ's gospel] denounced the rich and commanded them to divest themselves of all their pos-

[11] *Op. cit.*, p. 263.
[12] *Ibid.*, p. 264.



RABBI LEWIS BROWNE
Stranger than fiction

sessions, it attacked the whole sacrificial cult. . . . A people without possessions could never possibly afford fat bullocks to burn or skins of oil to pour away. . . . Moreover, because this gospel minimized the importance of learning, and commanded men to keep merely the spirit of the law, it attacked the whole Rabbinical cult." [13]

Again I wonder where Browne obtained these details without having recourse to "legends." And so he goes on down to the bottom of the page, by which time this same gospel has become "charged with quite devastating heresy." Devastating, but not inordinate!

If Browne's mind works in this way, so presumably do the minds of his readers. Religion aside, not a few results may be expected from a "modern temper" of this sort—from the fact that there are in this Republic a large number of people incapable of being troubled by equivocations, by the glaring inconsistencies of flatly contradictory statements living at seeming peace in the midst of the same argument, or people incapable of remembering or too careless to remember more than one statement at a time.

This "modern temper" makes it possible for men and women who do not accept the supernatural character of Christ to beg His authority for their own notions, no matter how opposed those notions may be to what is said in the New Testament records. In interpreting a statute one is compelled by a rule of law to consider all its parts together. In interpreting the Bible one indulges in the habit of selecting here a jot and there a tittle. Those selected become authority. Those rejected become legendary by the very act of rejection even at the hand of caprice or lack of information.

[13] *Ibid.*, p. 265.

Browne speaks, on page 268, of "the stupid and silly and gross extravagances," the "pious embellishments and patent falsehoods that clog and confuse the Gospel accounts." But the method for distinguishing the false from the true seems to be very simple. If a line of Scripture fits in with your preconceptions, it is wise and genuine. If not, it is either a forgery or the author was wrong. The principle of "the economy of hypotheses" is thus conserved.

It will be objected that this is what we do with any book, and that one who does not attribute divine authority either to the Bible or to the Church which promulgated it as canonical scripture, is guilty of no intellectual malpractice in using individual judgment.

But no ordinary book is treated in this way. An author whose good faith is impugned in one particular becomes a doubtful author. If he is convicted of one inaccuracy, his reputation for accuracy suffers to that extent. If his proofs have been carelessly read, one ceases to put much credence in individual words which possibly may be misprints. And if the book is suspected of being actually fraudulent in essential particulars, it ceases altogether to be of any documentary value except in so far as it be confirmed by other sources of information regarded as more trustworthy.

But our Brownes call the Gospels stupid, silly, grossly extravagant legends piously embellished with patent falsehoods—and then proceed to quote them (though it may be at second hand) as conclusive evidence where such quotation suits their purpose. Where quotation does not suit their purpose, they use paraphrase. If that won't do, they rewrite entire passages as they claim they should have been written, creating doctrines out of whole cloth,

which, whatever may be the nature of the weave, certainly bear no evidence of having come from a scriptural loom. Everywhere the gospel according to Browne claims to be the Gospel of Jesus. It seeks protection beneath the shadow of the Cross. Why?

It would seem that many who deny Christ's divinity still regard Him with a sort of reverence, even a sort of fear. They would find it uncomfortable to think that they were not following His precepts. So they meet the admonitions of theologians with the allegation that said theologians have corrupted the intent of the sayings of this Great Teacher. These "individualists" are afraid to stand alone. They have ceased to follow the so-called "higher criticism." It is apt to get too high. It has even been known to give aid and comfort to the theologians. The lower criticism, the no-criticism, is much easier.

Thus we have come to have a public which buys the books of the Brownes—men and women who have habituated their minds to a scorn of those rational processes which would tell them that certain assumptions entail certain consequences. They want to hunt with the hounds, and also to run with the hares. Browne's masterpiece of dual allegiance, however, relates, as we shall see, not so much to the Carpenter as to the Apostle to the Gentiles. But he is not yet ready for that bit of double-dealing. He first must say: [14] "What really marked Jesus as one unlike any preacher who had come before him was not so much what he said, as the particular authority on which he said it." (The particular authority of a preacher of ethics?) "Every other prophet had uttered his heresies in the name of God. . . . But this carpenter from Nazareth, for all his meekness and humility, spoke only in his own name.

[14] *Op. cit.*, p. 266.

'Take *my* yoke upon ye,' he said. So did he speak, not as the mouthpiece of God, but as one vested with an almost divine authority of his own. . . . Such a tone would have sounded blasphemous . . . even in a prince or a learned man. . . . But it . . . created and sustained the impression that he was a transcendent person, and bestowed upon him the power to take cringing serfs and make them over into towering men. Only because he believed in himself so firmly . . . could he make others accept his words. His tone was not that of a mere prophet, but almost that of God Himself.

"It was not merely that he could perform what were thought to be miracles. . . . It was more that he could carry himself with the divine assurance of an 'Anointed One.' " [15]

Strange conduct, surely, for One who preached merely ethics; who went about crying, "The Kingdom of God is at hand!" and meant only that the Kingdom of Good Moral Conduct was at hand. Why not say that He meant "The Kingdom of Eugenics is at hand!" and be done with it? And what can Browne mean by an "almost" divine authority, or a tone "almost" that of God Himself? It would seem that Christ was the Son of God, or was not; that He claimed to be the Messiah, or did not claim to be the Messiah. Browne, ignoring the law of the excluded middle term, attempts to insert a middle term by means of the word "almost." And he adds: "Whether Jesus himself was convinced he was the Messiah is a problem still unsolved. . . . Charlatans and madmen, arrant knaves and driveling fools, had time and again been hailed by the hysterical mob as the Awaited One. Is it any wonder therefore that an exalted person like this young

[15] *Op. cit.*, p. 267.

carpenter, Jesus, should have been hailed likewise?" [16]

But that is not the question. We are not concerned with what hysterical mobs may have thought about charlatans, madmen, arrant knaves and driveling fools, but with what Jesus thought about Himself. We are also concerned with what Jesus did when He was hailed as the Awaited One. It would seem that an exalted person, not self-convinced of his Messiahship, would have been constrained by his own exalted character to enter a disclaimer in such a case.

Of course, if one could quote the Gospels without fear of setting Mr. Browne to thinking of "all the stupid and silly and gross extravagances, all the pious embellishments and patent falsehoods that clog and confuse the Gospel accounts," one could prove even to him that Jesus actually claimed to be the Messiah. For in the Gospel According to St. John it is written,[17] "Jesus said unto him [Thomas], I am the way, the truth, and the life: no man cometh unto the Father but by me." And, "He that hath seen me hath seen the Father."

Doubtless Browne considers these and similar passages as suspiciously similar to certain legends told many centuries earlier about Zoroaster. But in any case his own argument should force him to conclude that Jesus was the Messiah; or was self-deluded; or was a charlatan. Or does Browne consider it possible to be a charlatan and an exalted person at one and the same time? Out of charity we must conclude that he decides in favor of the delusion hypothesis. Of the other alternatives, his text forbids one and his presumable sanity forbids the other. So it was the victim of a delusion which we are not even

[16] *Ibid.*, p. 267.
[17] St. John, XIV.

certain that he entertained who took cringing serfs and made them over into towering men.

"This Believing World" continues: "By the time Jesus reached the capital his fame had already preceded him. A great mob rushed out . . . wildly throwing their cloaks to the ground beneath the feet of the colt on which he rode. They hailed him as their Messiah . . . 'Hosanna!' they cried, ecstatically, 'Blessed be he that cometh in the name of the Lord!' "

Browne quotes the Gospels! But what makes him think that this triumphant entrance into Jerusalem is not a pious embellishment, or even a patent falsehood? He only tells us that "One wonders whether those poor wretches out of the alleys and dunghills of old Jerusalem understood who the man Jesus really was. One wonders whether even his own disciples understood—or whether even his most pious devotees today understand. To that frantic mob, at least, he was simply an arch-zealot, a martial hero who had come to lead them in bloody rebellion against Rome." [18]

If this meant anything to the author it would mean that he himself was a believer in the divinity of Christ. He seems here to be chiding the Jerusalem mob, to say nothing of Christ's pious devotees of today, for not being sufficiently aware of the spiritual nature of the miraculous Messiah's mission. But no. Browne is thinking of a "gentle, loving, helpless youth"; of a spirit "innately puritanical," a heretic who was outwardly "distinctly a conforming Jew" with an insistent pacificism, who adopted a tone that would have "sounded blasphemous even in a prince," and surely was astonishing in a teacher of ethics.

"The priests," Browne goes on, ". . . were afraid of

[18] "This Believing World," p. 269.

Jesus . . . not merely because his heresies endangered their own position." [19] "Had he been stronger in body no doubt he would never have joined the school of John the Baptist and become a saver of souls. Instead, he would have joined the Zealots, fighting with the sword against Rome. . . . From the beginning his strength must have been not the strength of the body but of the soul; and towards the end even that strength must have ebbed low in him." [20]

"And then he died. But he died only to come to life again, to come to a life more enduring, more wondrously potent than had ever been vouchsafed to him in the days before his shameful death. Indeed, he literally came to life again . . . according to those who had most earnestly followed him." [21]

"It was enormously difficult to prove that he had really been the Promised One. No doubt that was why the disciples began to piece together those genealogies we find in the Gospels. No doubt that, too, was why those extravagant legends concerning the conception, birth, childhood, and ministry of Jesus began to be devised. Uncharitable critics may say the disciples resorted to fraud in these matters—but it was all intensely pious and well-intentioned fraud. Before the ordinary Jew could be made to accept Jesus as the Messiah, Jesus simply had to be proved a descendant of David. . . . The disciples may not have been even remotely conscious that they were departing from the truth." [22]

Thus Browne seeks to destroy all reason for admiring, and at the same time pretends to continue to admire. Such

[19] *Ibid.*, p. 271.
[20] *Ibid.*, p. 272.
[21] *Ibid.*, p. 273.
[22] *Ibid.*, p. 276.

passages need no comment. Being no uncharitable critic myself, I will merely remark that the world now learns for the first time that the ordinary Jew can apparently be made to accept Jesus as the Messiah by means of the genealogies which are a part of the gospel story as it has come down to us. And what happened in Europe after this?

3. ST. PAUL AS SCAPEGOAT

"On a sudden—at least, so it seemed to those who had not marked the mounting of its steady ground swell," Browne proceeds, "that little Nazarene sect," the followers of Christ after the Crucifixion, "became a high sea that broke and rolled across the whole Roman Empire . . . sweeping over one land after another until finally it had inundated the whole face of the West and half the face of the East.

"To explain how that could have happened, one must remember what was going on just then in the Roman Empire. A great hunger was gnawing at its vitals, a desperate hunger for salvation." [1]

Now what does Browne mean by salvation in this instance? Ethical salvation? Salvation by law and order? Or salvation in the miraculous Christian sense, i.e., salvation from the macula of original sin? He is evidently writing from vague memories of what he has read and heard, from a host of facts, fancies and prejudices which he has uncritically allowed to find lodgment in his mind. It is not likely that he means anything in particular. But he tells us that—

"The whole Roman world seemed to be writhing in the

[1] "This Believing World," p. 277.

throes of death, and the fear of that death drove it to a frantic and panicky clutching after any and every chance of life. As a result, the mysteries, those secret cults [of Greece and Rome] which whipped men into orgies of hopefulness, flourished everywhere. . . . Those mysteries . . . in origin . . . were largely Oriental, and in essence they grew out of the belief that by certain magic rites a man could take on the nature of an immortal god. . . . That same legend was told—with variations—concerning Dionysus, Osiris, Orpheus, Attis, Adonis, and heaven knows how many other such gods. Arising out of the common desire for an explanation of the annual death and rebirth of vegetation, that legend was common to many parts of the world." [2]

It seems that what so agitated the Romans was a desire to explain the annual death and rebirth of vegetation—a phenomenon almost unknown in the climate of Rome. Anyway, they ran to these explanations in the midst of their panicky fear. But surely those mad pagan orgies which whipped men into hopefulness were not puritanical, ethical orgies.

Nor were early Christian orgies, according to Browne. For "By the first century of this era, the legend [of Christ] had spread to every civilized province of the Roman Empire . . . and had everywhere made the people drunk with the heady liquor of its mystery salvation." [3]

So Browne now admits that Christianity, even in the first century of its era, had ceased to be a mere ethic and become a "mystery salvation." Granting for the sake of an argument which is no argument that, coming from One whose "all consuming passion" was the obsessive hope of

[2] *Loc. cit.*
[3] *Ibid.*

His people that some day they would be "miraculously freed" by the Messiah it could ever have been anything else—granting this self-contradictory assumption, where are we to suppose the heady liquor came from? Answer, "From more learned folk." For—

"Side by side with these religious cults flourishing among the lower elements . . . different schools of philosophic thought flourished among the more learned folk. One of these was the philosophy developed in the city of Alexandria by an Egyptian Jew named Philo. According to this philosophy, God, the Father of All, manifested himself only through an intermediary called the Logos, the Word. This Logos, which was sometimes called the 'Son of God,' or the 'Holy Ghost,' had created the earth and was the sole mediator between it and heaven." [4]

So—"If in later years the Nazarene faith began to take on the color and shape of those heathen cults and strange philosophies, these Palestinian Nazarenes were not in the least responsible. It was one from outside the original brotherhood, a Jew from beyond the borders of Palestine, who was responsible. It was Saul of Tarsus [later called Paul] who brought on that change." [5]

You will note that St. Paul was responsible for coloring Christianity not only with the strange philosophy of learned folk but with the color of mystery cults which, originating in a desire to explain the annual death and rebirth of vegetation, whipped men among the lower elements of society into orgies of hopefulness. And he did this notwithstanding the fact that before his own conversion Christianity, originating with One who was a

[4] *Op. cit.*, p. 278.
[5] *Ibid.*, p. 279.

transcendant person who spoke in a tone "almost" that of God himself, and yet was but an ethical teacher, an insistent pacifist who but for bodily weakness would have taken up arms against the Roman Empire and perished by the sword—Christianity had already become drunk with the heady liquor of mystery salvation.

There seems to be some idea floating around in Browne's head. He seems vaguely aware that since the Crucifixion there had come a change. Indeed, there had. But it was not a change from ethics to religion, nor a change from a belief in a non-miraculous Messiah to a belief in a Messiah who was miraculous. Nobody ever believed in a non-miraculous Messiah. A non-miraculous Messiah is a contradiction in terms. But since the Crucifixion it had become evident even to charlatans, madmen, arrant knaves and driveling fools that Jesus was not to found a temporal, national kingdom of the Jews. Even the people were beginning to understand that Christ's Kingdom was spiritual and at least as broad as the earth. And if the Palestinian Nazarenes were not responsible, it must have been because their own belief and their own preaching signally failed of effect.

But let us get back to this Saul of Tarsus, who "must have had rather more than a passing acquaintance with Greek and Alexandrian philosophy."

"Most important of all, he must very early have learnt from slaves in the household or from Gentile playmates, of the mystery cults . . . and of the savior-gods in whom the masses put their impassioned trust." [6] And Christianity was already one of these mystery cults, a heady liquor that was to become a high sea and break over all the West and half of the East by the end of the first

[6] *Ibid.*, p. 280.

century—or as soon as the disciples, who were not in the least responsible, had invented a sufficiency of legends to make up a technic capable of fooling the people. Or are we to understand that St. Paul wrote the Gospels?

"Now Saul was a person of very violent likes and dislikes. He is said to have been an epileptic, and certainly he was a man of strange temperament. Whatever he did, he did with an intensity and extravagance that were distinctly abnormal." [7] The Eugenics Society should take note of this, in case another St. Paul arises among us. "But on his way to Damascus [to persecute the Nazarenes] a queer thing happened. . . . He was suddenly overcome by a seizure of some sort."

Browne does not attempt to name it, but a "seizure" in an epileptic subject is usually called an epileptic fit. Why does he not name it? Because he wants to help folks believe that they may continue to call themselves Christians while assuming that everything which marks Christianity is a disease. But the disease must be a polite one.

"And when, trembling and astonished, Saul came to himself, behold he was a changed man. . . . When he got to Damascus he . . . had become a complete convert . . . believing in the Messiahship of Jesus and in his resurrection. . . . He was but little interested in the gospel of the man Jesus,"—the ethics which cried, "Behold, the Kingdom of God is at Hand!"—he was interested only in the death and rebirth of the savior-god, Christ. . . . "Saul [under the name of Paul] became the great preacher of 'Christ crucified.'" [8]

"Jesus . . . was not the founder of Christianity, but its foundling. . . . Nor had his immediate disciples cre-

[7] *Op. cit.*, p. 280.
[8] *Ibid.*, p. 281.

ated the new faith." [9] "The Messiah put forward by them had all along been the Jewish Messiah." Thus once more Browne confuses the idea of a Jewish Messiah with non-miraculous morality. "Nor was it Saul, the studious young Pharisee, who founded the new faith, but his other self, Paul, the citizen of Rome. . . . It is unfair to compare Paul to Jesus, for the two belonged spiritually and intellectually to entirely different orders of men. . . . The one was a prophet and a dreamer of dreams; the other was an organizer and a builder of churches." [10]

According to this, it was a prophet and a dreamer who inspired the early disciples with the idea that he was the Jewish Messiah—those same disciples who saw in him a teacher of ethics only, yet corrupted the Gospels in the attempt to prove that he was something more—those same disciples who were not in the least responsible for the belief in Christ as divine that afterward crept into the Church through the door of epilepsy. And this ethical teacher is the same Being who believed with all His soul in the Promised One and permitted Himself to be greeted as the Promised One!

This amazing series of contradictions does not come from confronting Browne with other authorities, but merely from confronting Browne with Browne and without going outside of one chapter of one single book. Strange indeed is the behavior of those who seek to eat their cake and at the same time to throw it away.

For Browne would have it that Jesus, the prophet, dreamer and inspirer of belief in His Messiahship, was made a foundling in his own spiritual house by His antithesis, Paul—who accomplished this feat of disposses-

[9] *Ibid.*, p. 282.
[10] *Ibid.*, p. 284.

sion by winning general acceptance for the very belief in question. Or does Browne think that when the Jewish Messiah came to be understood as the Savior of the World, the idea was less dreamlike and prophetic?

Paul is evidently now drunk with the heady liquor of mystery-salvation. He has had a seizure. But Browne has been telling us how Paul's other self, Saul, the studious young Pharisee, has been listening all his life to tales of mystery-cults and savior-gods from the lips of household slaves and Gentile playmates; how he has acquired more than a passing acquaintance with the Logos philosophy of a Jew residing in Alexandria. All this is heady liquor. Jew and Gentile, high and low, slaves and playmates—none of them are exactly Puritans or ethical rationalists. And the new religion, most heady of all, appeals —not to the youthful Saul, who might supposedly be the dreamer of the pair, but to the more mature Paul, the Roman citizen, organizer and man of affairs.

Of course it is historically correct to say that the new religion did appeal to Paul rather than to Saul. But what happened on the road to Damascus was not, even on Browne's own showing, a change from a disbelief to belief in miracle religion, but a change from disbelief to belief in Jesus as the Son of God. An epileptic fit, we are about to be told, makes a common man over into a moral and intellectual giant. It transforms a listener to tales and mystical philosophies into a cold thinker. And this cold thinking leads to the acceptance of Christianity in its original form. I am not questioning that cold thinking might not lead to such a result; am not trying to intimate that there is anything antagonistic between a cold brain and a warm heart. Browne's fallacy here is

historical—the attempt to prove that Paul was a cold thinker and pretended to be nothing else.

As to a touching belief in the efficacy of disease, we may find it in minds much less confused than Browne's. It runs through such books as "The Psychology of Religious Mysticism," by James H. Leuba, professor of psychology at Bryn Mawr. According to Browne, mental unbalance produces indomitable courage and inflexible will. According to Professor Leuba, the hysterical saints lived lives of "joyful activity, broken only by transports of surpassing love and peaceful rest." [11] Not a very comprehensive description of the lives of saints. But if there be such hysteria as this, such epilepsy as Browne describes, it is a pity that the germs cannot be isolated, propagated, and sown broadcast.

These authors are among those who ruin their hypotheses by inadvertently accounting for too much. Their hysteria and epilepsy, stretched to meet all demands, lose the quality of disease and take on the quality of genius. Would it not be well at least to distinguish two types of hysteria (some writers make even epilepsy hysterical), the malignant and the benign? Or if the word hysteria merely means emotion, why not recognize the fact that an emotion may indicate conditions as categorically opposite as those reflected in the sensations of pleasure and of pain? It is grossly irrational to narrow it down to a single sinister meaning if it is to be put forward as the "cause" and the "explanation" of such diverse effects as those which are clothed in the willing garb of a Sister of Charity and those which lead to the unwilling wearing of a straight-jacket.

[11] "The Psychology of Religious Mysticism," p. 189.

Nor is it any less absurd to say that St. Paul, having partaken of heady salvation-liquor such as was drunken of aforetime only by charlatans, madmen, arrant knaves and driveling fools, and adding to its potency by insisting upon its universal applicability—to say all this even by implication, and then to add as Browne does [12] that "in his own class, Paul was one of the stupendously great men of the earth."

"He was," the narrative continues, "a superb statesman. And he was possessed of an energy, a courage, and an indomitable will, the like of which have rarely been known in all the history of great men. . . . Again and again he was scourged and imprisoned. . . . And yet he persisted, never resting from his grueling labor of carrying his Christ to the Gentiles, incessantly running to and fro, preaching, writing, arguing and comforting, until at last, a tired and broken man, he died a martyr's death in the city of Rome. . . . It was in the year 67, according to tradition, that Paul was beheaded."

Once again Browne considers himself privileged to repudiate all that a man stands for, his sole claim to distinction, and yet to put him on a pedestal of insincere rhetoric. When he speaks of Paul's "own class" does he mean the class of "charlatans, madmen, arrant knaves and driveling fools"? Indeed, St. Paul himself is reported to have said, "If in this life only we have hope in Christ, we are of all men most miserable."

But Browne has yet stranger things in store. He proceeds to write the history of the Church.

[12] "This Believing World," p. 284.

4. THE CHURCH AS SCAPEGOAT

Paul, says Browne, "had spent perhaps thirty years in the labor of spreading the idea of Christ, and by the time of his death that idea had already struck root far and wide in the Empire. It had divorced itself from Judaism, taking over the Sunday of the Mithraists in place of the Jewish Sabbath, and substituting Mithraist ritual for the Temple sacrifice." [1] [The Mithraist ritual centered in the slaughter of a bull!]

"Through Judaism, the religion of Persia left its mark also on Christianity; and not merely through Judaism, but also through Mithraism." [2] [Mithra is personified diffused sunshine!]

"In most of the cities there were already thriving christian brotherhoods, little secret societies much like those of the mysteries. . . . With the passing of the years, the pagan element grew. . . . The life-story of Jesus was embellished with a whole new array of marvels and miracles, and the man himself was made over into a veritable mystery savior-god. His character and nature fell into the maw of an alien philosophy, and then came drooling out in sodden and swollen distortion. He became the Lamb whose blood washed away all sin. He became the Son of God supernaturally conceived by the Virgin. . . . He became the Logos and the Avatar and the Savior." [3]

Browne here is complaining of alleged corruptions from Persian and other sources, all largely Oriental; as were in their origin the Greek and Roman "mysteries," of

[1] "This Believing World," p. 285.
[2] *Op. cit.*, p. 218.
[3] *Ibid.*, p. 285.

which he has complained hitherto. But he goes on to allege that "Although the religion of Jesus and of the first disciples was distinctly Oriental, although the whole Messiah idea was markedly a thing of the East, the religion about a Savior Christ was largely European. . . . Indeed, one gravely doubts whether Jesus, the simple peasant teacher in hilly Galilee, would have known who in the world that Savior Christ was."

Geography is evidently too much for Browne. Persia has suddenly become European. And St. Paul, with his "more than passing acquaintance" with the Logos philosophy of Philo, the Alexandrian Jew, and his subsequent conversion to the "distinctly Oriental . . . Messiah idea," is of the West. Perhaps Alexandria was not in Africa in the early days of the Christian era, and maybe Persia was then in the extreme Occident.

"It was inevitable for that change to come about. Christianity . . . was gaining too many converts too rapidly. . . . It would not have been so bad had they been converts from a world of ignorance. . . . But they were converts instead from a world of what we would call stupidity." [4]

So preaching founded upon the epistles of St. Paul, a man "who was one of the stupendously great men of the earth," and "a superb statesman," appealed chiefly not to the ignorant but to the naturally stupid! "No such testaments [as the stupid epistles of St. Paul and the silly legends and pious frauds called the Gospels] could be offered by the priests of Mithra, Cybele or Attis. For their deities were after all mythical. Only the Christians had a real man to worship; a unique and divine man, it is true, but nevertheless a person who had known human

[4] *Op. cit.*, p. 287.

woe and pain, who had suffered, and who had for at least three days been dead. That element of naturalism, of closeness to human reality, must have made Christianity a faith of extraordinary attractiveness." [5]

Surely Browne does not believe that a simple teacher of ethics, who, with good health, would have been a soldier, was actually dead and rose again, for he has told us that such a legend arose from pious frauds suspiciously like the frauds practiced long before in the case of Zoroaster. He must be meaning to say that the stupid followers of St. Paul and later preachers of miracle religion *believed* Christ to have been a Divine Man who was once dead. They must, then, have believed in the Resurrection. Is that to be regarded as an element of naturalism?

"There was a wondrous comfort in that religion"—of the stupid; "a mighty zeal that made it possible for the martyrs to go to their death actually with a smile on their lips. It took vile slaves out of the slums where they rotted, and somehow breathed supernal heroism into them. It told them that . . . death for the truth would mean only life everlasting." [6]

"Then came Constantine, and, in the year 313, an end to the persecutions." [7] An end to the persecution of a corrupt yet wonder-working Christianity originated by the abnormal St. Paul, you will observe, which must have worked through the powers of hysteria, epilepsy and suggestion. One would think that there was little harm left for Constantine to do. Nevertheless, "It was a costly triumph for Christianity, as every other such triumph has been in all history. What happened to Buddhism when it set out to conquer the Far East, now happened also to

[5] *Ibid.*, p. 288.
[6] *Ibid.*, p. 289.
[7] *Ibid.*, p. 290.

Christianity in the West." What, did it lose its power? No. "It became an official and successful institution—and so degenerate." [8]

A Mithraist ritual, draped in the rags of dying pagan mysteries and Philo-Pauline doctrines from an European Africa, manages to degenerate! It staggers on its downward way, growing more and more drunken with the heady liquor of mystery salvation drawn from a Europe located in the Orient.

"A faith cannot be institutionalized," Browne informs us, "for it is a thing of the spirit."

An institution, then, is something which subsists in matter. Men with faith in anything cannot be drawn together into an institution. Only men who believe in nothing can belong to institutions.

"Even dogmas or rites, which are things almost of the flesh, cannot be organized beyond certain bounds." [9]

What bounds? And within or without what bounds is it possible for a rite not to be organized? And to what extent is a dogma, like that of the Logos, for example, "almost of the flesh"? Anyway, "even after Christianity became primarily a thing of dogmas and rites, it nevertheless began to crack and crumble." [10]

Why "nevertheless"? After what he has said of dogmas and rites he should have said "because of." And does he say "began" to crack and crumble when it had already suffered the corruptions of St. Paul and Constantine?

Yes; and it begins to crack and crumble just as it is setting out as a tidal wave to overwhelm the West and half of the East! And as faith cannot be institutionalized, a sufficient lack of faith might have kept it from cracking

[8] *Op. cit.*, p. 292.
[9] *Ibid.* p. 292.
[10] *Loc. cit.*

and crumbling, also from "drooling out in sodden and swollen distortions."

"Paul," continues our author, "had used his theological terms rather loosely." [11] His stupendous greatness, then, was not as a teacher of religion. "Paul [same page] had spoken of Jesus as a savior."

Browne then tells of the controversies which arose over the doctrine of the Trinity and other matters, adding: "Scores of such questions arose. . . . Jesus had not been conscious of even the most ponderous of such questions. That dear, fervent young preacher, who had lived and died in the sublimity of a simple faith could never possibly have been conscious of them. Had he heard them posed, he would probably have shaken his head in mute bewilderment. . . . When one puts beside the Gospel accounts of the preaching of Jesus the official records of the wrangling and bickering of those church fathers, one feels that here is to be found the most tragic and sordid epic of frustration that the whole history of mankind can tell." [12]

Browne omits to name the church fathers he has in mind. But why put beside records, which are at least official, the silly legendary gospels which unconscious zealots corrupted into drooling distortions to suit their fancy?

And if Jesus could not have been conscious of even the most ponderous of theological questions, what is he supposed to have thought of the multitudes who greeted his entrance into Jerusalem, shouting, "Hosanna! Blessed be he that cometh in the name of the Lord!" That would seem to pose a rather ponderous theological question.

[11] *Loc. cit.*
[12] *Op. cit.*, pp. 292–293.

Moreover, all histories of the Jews which are not stranger than fiction give the impression that the Scribes and Pharisees of Christ's day were somewhat given to discussing theological questions, ponderous and other. One living in their midst and not being conscious of at least some of the questions that were to be debated later by the Church fathers must have been unconscious at all points.

"More than sixteen hundred years have passed since Christianity was made the state religion in the decadent Roman Empire. Throughout all those years [notwithstanding its cracking and its crumbling] it has been extending its borders. . . . It is estimated that at the present time about one third of the entire population of the world is Christian—approximately five hundred and sixty-five million souls. And of course, it is to the spirit of Paul regnant in Christendom that one must credit that enormous expansion. . . . It is because countless monks and healers and warriors and saints have felt Paul's call [sic!] to go out and win the heathen to Christ, that today more souls are turned to Christ than to any other deity on earth."

I do not know if Browne attributes the Pauline triumph to the Apostle's loose handling of theological terms, but he says, "these wholesale increases in numbers were not made save at a high price. . . . Just as Buddha had to be idolized before he could conquer the East, so Jesus had to be idolized, too, for pagan Europe." [13]

Yet—"despite all these compromises, the new religion remained always heavens above the old [paganism]. By assimilating pagan rites and myths . . . Christianity became at last almost completely pagan in semblance; but

[13] *Loc. cit.*

it never became quite pagan in character. The Old Testament puritanism which had so marked the life of Jesus was never routed. . . . If the spirit of Paul insisted that Cybele be taken over as the Mother of Christ, the spirit of Jesus insisted that her wild Corybantes with their lustful rites, and her holy eunuchs with their revolting perversions, be left severely behind. If the spirit of Paul demanded that the wild Celtic goddess named Bridget be accepted into Christianity, the Spirit of Jesus demanded that first she be made lily-white and a saint. . . . It [the Spirit of Christ] set its face hard against sacred prostitution and against all those other loosenesses and obscenities which arose out of the pagan's free attitude towards sex." [14]

So it was the spirit of a man who was "in his own class" one of the "stupendously great men of the earth," who favored prostitution, insisted upon taking Cybele into his loosely-worded theology, and—having failed to secure the lustful Corybantes and the holy eunuchs who still had a capacity for perversions—demanded and obtained the acceptance of a wild Celtic goddess named Bridget.

Browne describes this Spirit-of-Paul's Bridget. She was, it appears, one of three deities who "had already [2000 years ago] been sufficiently detached from their physical bodies to be thought of as remote gods and goddesses." The other two were Ogmius and Maponus.

At their festivals, "men and women lay together in the fields, and behaved as did all other primitive peoples in their religious festivals. . . . Not until the Christian idea of morality was brought to them did the Celts grow conscious of any wickedness in their old rites. And even then they did not give them up at once. Indeed, to this day

[14] *Op. cit.*, p. 296.

their descendants have not given them up entirely." [15]

"The difference between [the] Babylonian cult of Ishtar and the primitive Celtic cult of Bridget was entirely one of degree. . . . Both were inspired by dread of the same evil, sterility: and both sought to attain one end, fecundity. But one, the Babylonian, was far less primitive . . . far less wildly promiscuous and bestial. The Babylonian rites were conducted within the confines of stone temples, not out in the furroughs of the torch-lit fields." [16]

This undoubtedly gave the Babylonians the ethical advantage. And it seems that the Celtic gods and goddesses were not only primitive, but continually kept their followers alarmed lest they (the goddesses) should forget how to become fecund. The ritual in the furrows of the torch-lit fields, "to this day not given up entirely," was for the purpose of overcoming the deities' "bashfulness," Browne tells us, and to set them an example of what was desired. And if the spirit of Paul could have had its way, such a ritual, though perhaps conducted within stone temples, would have been established in Rome! And there it would doubtless have been practiced today—as it is, I gather from Browne, in present-day Ireland!

"The spirit of Jesus flickering in Christianity made it at least nominally a religion of ethics," Browne goes on. "For Jesus, one must remember, had not been in the least concerned with ritual. Like every other great Jewish prophet, he had preached only ethics. And despite all the compromises of the world-conquering Pauls, that ethical emphasis of the teaching of Jesus persisted as a mighty leaven in the church. It gave to the early Christians that

[15] *Op. cit.*, p. 64.
[16] *Ibid.*, p. 70.

gentle nobility which history tells us graced their faith." [17]

When was this? Brown says that "of the life of the first Nazarenes we know exceedingly little." [18] He gives the year 67 as the date of St. Paul's martyrdom. Can it be that the early Christians were gentle and noble even after the loose sex ideas and loose theological terms of the great Apostle had been given a chance to begin their deadly work?

"The church itself, with its foul record of crusades and inquisitions and pogroms, cannot be said to have ever been really civilized. But that admission does not at all discredit the potency of the spirit of Jesus. . . . True, there were indeed Dark Ages in Europe when the power of the Church was at its height. But who knows how far darker they might have been, and how much longer they might have endured, had the Church not existed?" [19]

"One must remember that Christianity came into a world that was sinking. . . . It alone sought to keep civilization going. It failed. It could not keep from failing. But be it said to its glory that at least it tried." [20]

"The glory of trying to save the world from bestiality belongs primarily to but one element alone in Christianity; the original Nazerene element. And that element, one must remember, was never dominant in the faith save during those years before it was really Christian. Once Paul came on the scene, the light of the religion of Jesus began to fade, and the glare of the religion about Christ [that is, the doctrine that Christ was the Son of God and the Redeemer of the World] blazed over all." [21]

[17] *Ibid.*, p. 279.
[18] *Ibid.*, p. 274.
[19] *Ibid.*, p. 277.
[20] *Ibid.* p. 298.
[21] *Ibid.*, pp. 298–299.

"Yet though the light from Galilee [the light of One who "like every other great Jewish prophet" taught only ethics, yet believed with all his soul in the Messianic idea] faded . . . it never was quite snuffed out. . . . For long centuries it smouldered. . . . And then slowly that forgotten spark began to brighten once more. A devastating incursion of Huns and Saracens blew the spark to a flame. As never before in full six hundred years, the Christians began to think again of their suffering Savior." [22]

This certainly is what Browne writes, incredible as it may seem. The Pauline doctrine "about Jesus" has been overshadowing the world, threatening to extinguish the spark of the merely ethical religion preached by Jesus himself. And now the spark blows into a flame—and lo! it, too, is a religion about Jesus! Men begin to think again of their suffering *"Savior!"* Moreover, Jesus was a pacifist, and all that was needed to fan the spirit of his teaching into a flame was a devastating incursion of Huns and Saracens. Was it the ethics of the invaders which did the trick?

"Like a mad fire the hope spread over Europe that the year 1000 would see the return of the Redeemer." Yes, the word is "Redeemer." So Brown does know what "Savior" means. And we were right in thinking that he intends to say that the spark so long all but quenched by a religion about Jesus proved, when it revived, to be itself a religion about Jesus, a belief in Him as a supernatural Being, able, if he liked, to return—in short, the Logos, as had been taught by the "abnormal" St. Paul. And Browne appears to be utterly unconscious that he has stultified his whole argument. The fact that he has in

[22] *Op. cit.*, p. 299.

effect said that the world expected a helpless teacher of ethics to return after a thousand years; and has also said that belief in this helpless ethical teacher constituted a belief in a miraculous Savior and Redeemer, which belief had been for hundreds of years all but stifled by the doctrine that he was indeed a miraculous Savior and Redeemer—all this troubles the Browne mind not at all.

"The year 1000 passed, and no Redeemer came—but Europe was a little redeemed nevertheless." By the ethical Huns and Saracens, apparently. "Men turned from what the Church of Christ insisted on offering them, and instead began to grope after the gospel of Jesus for themselves. They took to reading the Scriptures in their original tongues." (The people did? Or does he mean in the vernacular? In either case it must have exposed them to what Browne gives us to understand is a mass of silly fables.) "And reading them they began to see at last how far the Church had wandered from the pristine truth." (A truly wonderful feat of discriminating literary criticism. Were the people so familiar with Zoroastrian tales that they were able at once to discard all passages having a suspicious resemblance to them?) "They discovered at last how shamelessly the priests had substituted rite for right, how flagrantly they had ritualized all morality. . . . The clerical authorities took alarm. Despotically they issued proclamations prohibiting the laity from even glancing at the bible."

Browne owes it to the world to publish those despotic proclamations, so that we may know their authors. I have myself seen the Bible in chains in Italian churches, and I understand that chains were much more common in the middle ages than now. But if the object was not to keep the books from being stolen but to keep them from being

read, the riveters of the chains were indeed stupid people. For they chained the books by the backs and in a manner which permitted them always to lie open.

So—"the Bible was read nevertheless. . . . The flame of heresy burned on." But why, if the Church was so opposed to it, did it gather the Bible together in the first place? Browne does not say. What he does say is that "In the fourteenth century, Wycliffe did godly mischief in England; in the fifteenth John Huss carried on in Bohemia; in the sixteenth Luther, Zwingli, and Calvin led the Protestant revolt." [23]

"But one must not imagine that Protestantism was ever purely Nazarene in spirit—any more than Catholicism was ever unrelievedly Pauline." (True enough. I have even heard it said that Catholicism is to a certain extent Petrine.) "Protestantism includes every type of religious thought. Only slowly and with many pangs, is even Protestantism shaking off the religion about Christ." (Then that revival of belief in a supernatural Savior and Redeemer, instituted by the Saracens and Huns, was not a flash in the pan, but carried over to a certain extent into the godly mischief of Wycliffe, Huss, Luther, Zwingli and Calvin!) "Only slowly, very slowly is it [Protestantism] beating its way back to the religion of Jesus." [24] That is, to ethics.

"Though the Church of Christ may stand guilty of untold and untellable evil, the religion of Jesus, . . . has accomplished good sufficient to outweigh that evil tenfold."

If the evil referred to expressed itself in facts, why is it untellable? Browne, I think, should tell it, and in

[23] *Op. cit.*, p. 300.
[24] *Ibid.*, p. 300.

detail. He ought not to emulate St. Paul in the loose use of words. As the page stands, we cannot be sure that he does not refer to the Church of England and the hanging, drawing and quartering of Catholic priests during the reigns of Elizabeth and James I. But the "religion of Jesus," i. e. ethics, "Has made life liveable for countless millions of harried souls. It has taken rich and poor, learned and ignorant, white, red, yellow, and black—it has taken them all and tried to show them a way to salvation. To all pain it has held out a balm; to all in distress it has offered peace. To every man without distinction it has said: Jesus died for you! To every human creature on earth it has said: You too can be saved! And therein lies Christianity's highest virtue. It has helped make the weak strong and the dejected happy. It has stilled the fear that howls in man's breast and crushed the unrest that gnaws at his soul. In a word it has worked —in a measure." [25]

I wish I might let this eloquent passage stand without comment. Taken by itself, it sounds almost like the words of a sincere believer in Christ as the supernatural Savior of Men. But, taken in connection with what has gone before, it seems to me abominable. Here is a man who has denied the supernatural nature of Christ time after time in the preceding 300 pages. And now he is using words which imply such a miraculous nature, or else mean nothing at all. Yes, they mean something. They mean that this light, this balm, this peace, this salvation which is Christianity's highest virtue, is an illusion. To every man this Christianity has said: Jesus died for you! Here the doctrine of the Vicarious Atonement is indicated. And St. Paul, in preaching that doctrine, that "religion about

[25] *Ibid.*, p. 301.

Jesus," founded a new faith and made Christ the mere foundling of Christianity! True, Browne has also said a great deal on the other side. That is precisely the trouble. He thinks it is possible to stand both with the sheep and with the goats.

But the final chapter of "This Believing World" (for Christianity is not its climax) is consistent. It is entitled, "What Happened in Arabia." And it thus concludes:

"Islam . . . has been one of the most effective civilizing forces in the history of Africa and Asia, and in a measure also in that of Europe. . . . The supreme gift of Islam was the idea of unity which it somehow drilled into the heads of a hundred races—not merely the unity of God, but even more the unity of mankind. . . . Every other great religion taught more or less the same doctrine [in regard to submitting to Allah], but none with such fierceness and unrestraint. . . . Islam excluded no man from the army of Allah. . . . And that is why to this day Islam can still win converts with twice the ease of any other religion. That is why to this day Islam is one of the mightiest institutions on earth for the ordering and beautifying of life in at least the 'backward' lands."

In the beginning there was fear. In the end there is no God but Allah, and Mohammed is his prophet!

5. THE STORIES OF DURANT

It is with regret that I include Will Durant among the Misbehaviorists. He is no crude mechanist, and his popularity is so great that, like Sinclair Lewis, he has almost ceased to be a mere individual and become an institution.

Dr. Will Durant
Almost an institution

And in some respects his success is a most gratifying and hopeful sign of the times.

Some say that it was Durant who showed us that we were fond of serious reading and not of the light novels which the publishers for so many years fancied that we craved. But in reality it was "The Education of Henry Adams" which showed us that. And I am not so certain that a mere love of heavy reading is such a good sign. By the time reading becomes substantial it begins to make some difference what it is weighted with.

I like to think that "The Story of Philosophy" has been bought in such quantities because it is, to a very great and very charming extent, The Story of the Philosophers. Durant's ability as a writer of biography amounts almost to genius. Nor are his accounts of the philosophers' philosophies often other than good bits of skillful summing-up interspersed with apt quotations. My only misgivings revolve around the stories of Durant—those paragraphs of criticism and seemingly personal opinion with which he usually ends his chapters—around those and certain omissions. What have we here, the story of philosophy, or only the story of a certain bias purporting to be the story of philosophy?

As was to be expected of a born biographer, Durant follows the method of using environment to explain belief. The pessimism of Schopenhauer is due to the fact that he lived in the first half of the nineteenth century, the age of the Holy Alliance, when Waterloo had been fought, the Revolution was dead, and the Son of the Revolution rotting on a rock in a distant sea. "Something of [Schopenhauer's] despair came from the pathetic distance of St. Helena." [1] And when "Mme. Clotilde de Vaux (whose

[1] "The Story of Philosophy," p. 326.

husband was spending his life in jail) took charge of Comte's heart, his affection for her warmed and colored his intelligence. So Comte's later Religion of Humanity was due to the happiness of his illegitimate union, just as his earlier Positivism had been due to the marital infelicity which led him to attempt suicide in the Seine.

It is the method by which Taine years ago sought to explain all English literature. Durant is an environmentalist—which, after all, is better than being a mad hereditarian. One is tempted to enquire into his own environment, his college, his religious and philosophical surroundings, and to read dates and geography between his lines. But I cannot bring myself to apply either the environment or the heredity hypothesis to the exclusion of that entity which comes from neither, that ego which learns or does not learn from its contact with that which is not itself.

That Durant is not himself a philosopher, is evident—and in his favor. We really do not need another philosopher just now—of the sort we would be likely to get. He has no system of his own, no universal touch-stone, no central thesis giving unity to his several beliefs. In his mind Kant, Darwin and Bergson meet, but no more mingle than do oil and water. An emulsifying *tertium quid* is lacking. This lack should have made him an ideal historian of other men's theories. And it almost did.

But there is another lack. The complete historian should have a complete experience. He should have been submerged in the main stream of thought, even if he has failed to sound all its dead-waters to the bottom. And if environment and the accident of birth do not offer him such experience, he should have that thirst for knowledge which leads to exploration and discovery.

The Durant ego lacks precisely that. It was born in a

lake, and it has no thirst for the sea. Like certain aquatic creatures, it takes what floats into its mouth, but makes no explorations. What Durant has given us is simply not the story of philosophy. It is merely a series of interesting comments upon the curriculum of a certain type of college which does not even belong to the University of World Thought. This provincialism is unfortunate, for it is certain to deceive provincial readers with the idea that they have listened to the whole story.

It is difficult, after the reading of a book which is an avowed recapitulation of many foreign opinions, to say what an author's own opinions may be. It is evident that Durant is no Catholic; not quite so evident whether or no he is a believing Protestant. He seems to have little sympathy with Protestantism as a whole, and less yet with Fundamentalism. It may be safe to say that his personal bias takes the direction of a vague Humanism.

To quote, without taking the greatest precaution not to pass off some mere explanatory paraphrase as the author's own, would be so unfair that I hesitate to quote at all in proof of anything. There are, however, certain passages which are clearly Durant, and not Plato, Aristotle or Nietzsche boiled down—though even here we must be on guard lest what we see is Durant under the momentary influence of his subject, not Durant in his daily habit. It is the wind which does not blow, the things which he does not say, that speak most eloquently and surely of the man.

Chapters, and most of them long chapters, are given to Plato, Aristotle, Francis Bacon, Spinoza, Voltaire, Kant, Schopenhauer, Herbert Spencer, Nietzsche; a chapter to three contemporary Europeans—Henri Bergson, Benedetto Croce and Bertrand Russel; and a final chapter

to the three American moderns, George Santayana, William James and John Dewey. There are adequate pages devoted to Rousseau, Locke, Hegel, and many a lesser light. Some, you will note, are pre-Christian; some are atheistic; some deistic, monistic, or agnostic. It is a chorus which is irreligious with a vast predominance, with here and there a tolerant voice for modernistic Protestantism. Bishop Berkeley, represented by a few paragraphs, stands practically alone as the exponent of a particular faith.

It will be said that this is the story of philosophy, not of theology. But I cannot see the force of the explanation. Theology is certainly philosophy; and why should one man be barred because he begins with the assumption that God has revealed Himself in an Incarnation, and another admitted who begins with the assumption that God has revealed himself in the human will of a super-man devoted satanically to selfish ends, or is in the process of revealing himself in an *élan vital,* or begins with the assumption that there is no God? Surely the historian is not bound to believe every philosophy he outlines. And surely the Christian assumption is no more of a foregone conclusion than are the others.

Nor even if it be granted that the story of philosophy, because of the current use of the word, is naturally a story of secular philosophy, does Durant come off any better. The Chinese philosophers and the Vedantic philosophers of India may be said to be so widely separated from us in time and space that they do not belong in a history of our culture. That was more true in the days when Durant was a boy than it is today. But let it pass. What about the Scholastics?

The Scholastics were not only theologians, but philosophers and scientists; they dominated the thought of

Christendom for a thousand years, and still dominate a large section of Christendom, not counting their influence in quarters where it is felt rather than recognized.

Durant admits that his treatment of Scholasticism is "inadequate," but excuses himself with the plea that the inadequacy was due to lack of space. But he finds space for ten and a half pages about Benedetto Croce—and no page at all for St. Augustine, Albertus Magnus, or St. Thomas Aquinas.

The Angelic Doctor's name, however, is mentioned. It appears in a pictorial table of "philosophic affiliations," constructed in the manner of a family tree. According to this table, Aquinas stems from Aristotle, who stems from Plato, who stems from Socrates, who stems from the Sophists. There is also a branch line of affiliation extending to the left like a bar sinister, connecting the great scholastic with Christian Theology followed by a question mark. I do not fathom the meaning of the question mark. But Christian Theology (?) itself stems from Zeno the Stoic, and he from Diogenes, and he from Antisthenes, and he from Heraclitus. There is yet another branch line leading from Antisthenes, touching Socrates, and ending in Aristippus, of the house of Democritus and Leucippus.

So Aquinas appears to be quite free from any unquestioned philosophic affiliation with St. Augustine, Albertus Magnus, St. Paul, or even Jesus Christ. We begin to be glad that Durant had no room for an "adequate" treatment of the Scholastics.

Unfortunately, he does not quite drop them with the chart. In a note "To the Reader" he refers to them as "half-legendary." It is odd that a school which included the leading thinker, secular or sacred, of the Thirteenth Century, the age of Dante, should have become legendary

in the New York of 1926, from which Durant dates his book.

Turning from legends, we come to Benedetto Croce, who, writes Durant [2] "is a sceptic with an almost German gift for obscurity . . . an anti-clerical who writes like an American Hegelian . . . an Italian Catholic who has kept nothing of his religion except its scholasticism and its devotion to beauty." And lo, we are back to legend again! "Perhaps the comparative infertility of Italy in the philosophy of the last hundred years," Durant goes on, "is due in some part to the retention of scholastic attitudes and methods even by thinkers who have abandoned the old theology." Adding,[3] "He [Croce] is, after all, a product of the scholastic tradition . . . he is a germanized Italian."

Now it is quite true that, though Thomas Aquinas was a native of the Kingdom of Naples, he studied under Albertus Magnus at Cologne—probably during the year 1244; returned to Cologne in 1284; and perhaps visited it several times thereafter. But both he and his illustrious master were scholastics of the school of St. Augustine, who died in the year 430. The one German thing about St. Augustine is that Eucken, the German philosopher, says of him: "If our age wishes to take up and treat in an independent way the problems of religion, it is not so much to Schleiermacher or Kant or even Luther or St. Thomas that it must refer as to Augustine, and outside of religion, there are points upon which Augustine is more modern than Hegel or Schopenhauer."

Durant surely cannot mean that a living Italian has been "Germanized" through having absorbed the teach-

[2] *Op. cit.*, p. 507.
[3] *Ibid.*, p. 511.

ings of a master who died in 1280 and was the follower of another master, in Hippo, who died in 430. As one of the chief tenents of Scholasticism is that the Christian creed can be proven by reason alone without recourse to Revelation, Croce of course had to repudiate his scholasticism, German or not, along with his religion. All that can remain to him, if anything remains, is a certain training of the mind. Whether he has shown the effects of such training, or made good use of it, is a matter of opinion. What Durant shows here is total unfamiliarity with his subject. He is merely applying certain notions which he picked up uncritically from unauthorative sources. But having mentioned this Scholasticism which he seems not to have read, he goes on, *re* Croce, to ask: "How could an Italian be unkind to a Church that had brought all the world to Canossa, and had levied imperial tribute on every land to make Italy the art-gallery of the world?"

My own rather extended acquaintance of the art-galleries of the world has heretofore inclined me to believe that Italy has been more sinned against than sinning in this regard—and that in Italy, itself, such stolen masterpieces as are to be seen were largely stolen from the Church and placed in galleries belonging to an anti-clerical state. But perhaps I am mistaken—and mistaken also in thinking that since 1870 the Pope has been self-imprisoned in the Vatican when in reality he has been roaming for the (until very recently) irreligious Italian Government abroad, stealing pictures. Or was it before 1870 that the thieving from foreigners was done—during the days when Italy was overrun with foreign armies, and the term Italy was a mere "geographical expression?" Does he refer to the marble treasures of the Vatican rescued from war

and neglect in Greece and elsewhere? Or were the thefts of a still earlier date, when most of Europe was comparatively barbarian? I can think of one such instance. Some of the decorations for St. Mark's, Venice, were brought by the Venetian merchants from the Orient—as was the body of their patron saint.

But Durant continues: "So Italy remained loyal to the old faith, and contented itself with the 'Summa' of Aquinas for philosophy."

When? Why, until Giambatista Vico came. He "stirred the Italian mind again; but Vico went, and philosophy seemed to die with him. Rosmini thought for a time that he would rebel; but he yielded. Throughout Italy men became more and more irreligious, and more and more loyal to the Church. Benedetto Croce (born in 1866) is an exception." [4]

What Durant must mean is that the more irreligious one becomes the more loyal one naturally is to the Catholic Church. If that be true, the Italian *Risorgimento* (the political movement which led to the union of Italy under an anti-clerical government) was certainly most loyal—and it expressed its loyalty by taking the Church's temporal empire away from it! But in what respect was Croce an exception to this devotion and this irreligion?

For one thing, he was nearly killed beneath the ruins of a house at Casamiccicla during the earthquake of 1883. For another, he was "given so thorough a training in Catholic theology that at last, to restore the balance, he became atheist."

But this, apart from the training, was precisely what the *Risorgimento* did, so there is no exception here. The exception, then, must lie in the fact that he did not re-

[4] *Op. cit.*, p. 509.

main loyal. He could not get enough of the Catholic theology out of his system to be loyal to the Catholic Church—though he could be loyal enough to imitate the *Risorgimento* in repudiating it! This, as Durant himself says [5] of Croce's philosophy in general, "is as clear as a starless night."

I wish to record my entire agreement with this final verdict as to the Croce philosophy. From the most absurd premises in the world, Durant has somehow arrived at a correct and satisfactory conclusion.

But he does not stop here. He goes on to say that Croce "slides easily into logical casuistry and refutes more readily than he can conclude. It is easy to see that Scholasticism is being held to blame here. Durant does not like Scholasticism, and he does not like Croce. Not that there is the slightest evidence that Durant ever read a single scholastic author. I am merely assuming that he has. And he would like to derive the cause of one dislike from the source of the other. So he permits himself to use the word "casuistry" as loosely as Browne would have us believe St. Paul used theological terms—that is, he uses it as an old lady sitting by the fire might use it, to denote sophistry, and sophistry to denote an unsound argument. A philosopher could never have so forgotten the original meaning of casuistry as the art of dealing with cases of conscience, especially when writing of Croce with the idea that he was a scholastic. But perhaps it was the "German" scholasticism of his subject which fogged the Durant mind at this point.

But how explain the following? He tells of Croce becoming Minister of Public Education and a Senator, and denouncing the World War. Then he adds: "But Italy has

[5] *Ibid.*, p. 316.

forgiven him now; and all the youth of the land look up to him as their unbiased guide, philosopher and friend." [6]

Had Durant but said, "The anti-fascist wing of the *Intelligencia,* most of whom are far from young and cling to the atheistic French Revolutionary philosophy of the *Risorgimento,* look up to Croce," the statement would have been true—in so far as a member of the *Intelligencia* may be said to look up to anybody. Every unbiased person who has spent much time in Italy of late knows that most of the youth of that country today look upon Mussolini, and not Croce, as their guide, philosopher and friend. And Mussolini is a Catholic. Has Durant never heard of the Black Shirts or of the March on Rome?

But perhaps I am wrong in finding fault with Durant's fondness for catering to popular misconceptions which no doubt he shares. He quotes his favorite Bergson as saying, "The time given to refutation in philosophy is usually time lost. Of the many attacks directed by the many thinkers against each other, what now remains? Nothing, or assuredly very little. That which counts and endures is the modicum of positive truth which each contributes."

One wonders how this modicum is to be discovered without criticism, and is informed (still by Bergson) that "the true statement is of itself able to displace the erroneous idea, and becomes, without our having taken the trouble of refuting anyone, the best of refutations." Is this not saying that a garden will grow more flowers if one does not criticise it by trying to pull up the weeds? Is it not sheer nonsense to talk of erroneous ideas displacing themselves without anybody taking the trouble to refute anything, when there was never a time in the his-

[6] *Op. cit.,* p. 509.

tory of man when ideas, true and false, did not have to meet the objections of the fault-finder? No; Durant assures us that Bergson speaks with "the voice of wisdom herself," and that when we " 'prove' or 'disprove' a philosophy we are merely offering another one."

Merely, you understand. Then all philosophies are indifferent mixtures, one as good as another. Here is pragmatism mixed with *laissez-faire*. And like pragmatism (which at one and the same time holds that whatever you think is true is indeed true for the moment and as far as you are concerned, and that nevertheless the test of truth is the fruit it bears), it does not understand itself.

CHAPTER VIII

THE ANCIENT TEMPER

WHAT now about that "modern temper," which seeks to do away with the romantic ideal of a world well lost for love and with the classic ideal of austere dignity? We have followed it through many channels of expression, and have discovered that it was well described. Of either dignity or love it has not a shred.

But we have discovered another thing. It is not being driven from the old ideals by science. Or rather there are two sciences, one modern, scientific and inspiring. The other not quite so modern in anything but the names which it applies to itself, not quite so scientific—indeed, no longer scientific at all.

Its chariot comes thundering down Main street, and all are bidden to throw themselves before it and let its wheels pass over them. One would think it was the car of Juggernaut. But its license, when we come to look it up, proves to have been taken out by Propaganda.

Sometimes these propagandists descend and try to persuade us with pleasant words. More often they prefer to threaten. Those who stand upright before them or try to block their passage are termed morons, or ignoramuses. To be snubbed by this new snobbery is almost like not being in society. Yet after all, a university professor is sometimes only a school-teacher, and not necessarily a

good one. The letters PH.D. after a man's name do not turn him necessarily either into a scientist or a Venerable Don Bosco. Beyond question, some of our Misbehaviorists would have constructed better theories had they come more in contact with other than diseased or adolescent minds.

But why the propaganda? Why this endeavor to make man out a machine or worse? The ancient hypothesis was that such teachings emanated from the devil. To discuss that ancient hypothesis would take us beyond the limits of the present volume, but it cannot be denied that it seems rather to fit the case. Certainly the temper of these gentleman is no newer than is the temperament of Lucifer. Among the many things which distinguish man from the animals is this strange perversity, this ability to sink beneath himself.

The "modern temper" then is but the ancient temper, and like the ancient it is of two sorts. This division also is old—as old as the distinction between good and evil.

Fundamentally, man never changes. I do not mean the individual man. He may change immensely, and from having chosen to turn to the left may turn and choose the right. But this choice has always been open before him.

Not even our fashions, our methods, our ways of doing things are quite as novel as we sometimes like to think. Albertus Magnus, though he died in 1280, laid down the principles of our cherished "experimental method,"—and they were already old. Says Fenelon, "If an enlightened man were to gather from the books of St. Augustine the sublime truths which this great man has scattered at random therein, such a composition . . . would be far superior to Descarte's 'Meditations.' " That takes us back to before the year 430—and wisdom then was far from

being a child. There is going on about us all the while a systematic falsification of history so that the present may seem to stand upon an isolated pedestal, or rest like a tumbleweed upon a heap of sand, or like a thistledown to float seemingly upon nothing. Probably this sort of thing, too, is coeval with the dawn of human life.

Pyrro, the Greek philosopher, who attained fame from having made the remark that "nothing is more one thing than it is another,"—in other words that black is no blacker than is white nor white whiter than black—Pyrro died 270 years before Christ. He voiced the "modern temper" of his day as Watson and Freud voice it in ours. For we have seen that Psycho-Analysis and Behaviorism spring from the same root. It makes little difference to what we are slaves, whether to reflexes or passions. If there be but one stuff, it is the same stuff whether we call it spirit or matter. No man ever yet succeeded in thinking of an abstract triangle, let alone an impersonal God.

So, of old time as today, reason was Psyche's good servant but a sorry master. Then, as now, reason died with the fool who said in his heart, "There is no God." Then as now Wisdom cried, not in the class-room but in the streets, and had its being in that Love—*"che muove il sole e l'altre stelle"*—which moves the sun in heaven and all the stars.

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